

Marital Relations Among Former Prisoners of War: Contribution of Posttraumatic Stress Disorder, Aggression, and Sexual Satisfaction

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In this study, the authors examined the marital adjustment, spousal aggression, and sexual satisfaction of prisoners of war (POWs) 3 decades after their release. More specifically, the authors examined the extent to which impaired marital relations among former POWs are an outcome of their captivity or of the posttraumatic stress disorder (PTSD) that some of them developed. The authors compared 25 former POWs with PTSD, 85 former POWs without PTSD, and 104 control veterans. The findings reveal that the marital problems of former POWs are more related to PTSD than to their captivity. PTSD is related to decreased marital satisfaction, increased verbal aggression, and heightened sexual dissatisfaction among former POWs.

Keywords: POWs, marital relations, PTSD, aggression, sexual satisfaction

War captivity is widely recognized as a traumatogenic experience. Studies of men who were prisoners in various wars have revealed rates of posttraumatic stress disorder (PTSD) ranging from 30% to 80% even decades after their release (e.g., Sutker, Allain, & Winstead, 1993; Ursano, 1981).

Although PTSD is related to marital difficulties, this area has been given limited attention among former prisoners of war (POWs). On the whole, studies of spousal relations have revealed that war captivity has a deleterious effect on marital life (Bernstein, 1998; Cook, Riggs, Thompson, Coyne, & Sheikh, 2004; Dent et al., 1998; Neria et al., 2000). However, it remains to be determined whether these effects are due to the captivity experience or whether they are due to PTSD, which only some of the prisoners develop after captivity. Cook et al. (2004) suggested that the marital problems of former POWs may stem from their PTSD and not solely from their captivity. These findings are in line with those of studies on combat veterans, which have consistently shown that PTSD veterans have more marital problems than veterans without PTSD (Jordan et al., 1992). However, these researchers examined only former POWs with PTSD and former POWs without PTSD and did not investigate non-POW control group veterans. Therefore, the possibility that captivity in itself impairs marital relations cannot be ruled out.

Furthermore, none of the studies queried two key areas

that contribute to marital relations, namely, spousal aggression and sexual dissatisfaction. Heightened spousal aggression and violence (Beckham, Moore, & Reynolds, 2000; Evans, McHugh, Hopwood, & Watt, 2003; Frueh, Henning, Pellegrin, & Chobot, 1997) and reduced sexual satisfaction (Kotler et al., 2000; Letourneau, Schewe, & Frueh, 1997) have been reported among combat veterans with PTSD but have never been studied in former POWs.

Our first aim in this study was to examine the marital adjustment, spousal aggression, and sexual satisfaction of former POWs 3 decades after their release from captivity. More specifically, we examined the extent to which the impairment of marital relations among former POWs is related to captivity or to the PTSD that some of them develop. Therefore, we compared former POWs with PTSD and former POWs without PTSD and a matched control group of combat veterans who had not been in captivity. Our second aim in this study was to examine the unique contributions of PTSD level, level of aggression, and sexual satisfaction to the marital adjustment of former POWs.

Method

Participants

In this study, we examined two groups of Israeli veterans of the 1973 Yom Kippur War: former POWs and control group veterans. The former POW population consisted of the 240 former POWs who had been captured from the Israeli army land forces during that war. Of these, 37 could not be located, 9 had died, and 10 could not participate because of serious psychological impairment. Of the remaining 184 former POWs, 124 answered the study questionnaires (response rate: 67%). In these analyses, we included 110 former POWs who were married or had a partner at the time of the study. On the basis of a self-report questionnaire that has *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; American Psychiatric Association, 1994) criteria, 22.7% of the former POWs in the sample ($n = 25$) indicated that they had

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experienced PTSD, and the rest ($n = 85$) indicated that they had not experienced PTSD.

A control group of 280 combat veterans of the same war, matched to the former POWs in personal and military background, was sampled from the Israel Defense Forces computerized data banks (Neria et al., 2000). Of these, we tried to contact the 185 veterans who had served as a control group in an earlier study by our research team (Neria et al., 2000). Of those veterans, 41 could not be located, and 1 had died. Of the remaining 143 control group veterans, 106 filled out the questionnaires for this study (response rate: 74%). Of the control group veterans, 2 had PTSD and were eliminated from further analyses.

The three groups did not differ in age, years of marriage, or number of children. The mean age of the participants at the time of data collection was 53.51 years ($SD = 4.35$). The mean length of the participants' marital relationships was 29.89 years ($SD = 6.80$), and the mean number of children that participants had was 3.28 ($SD = 1.20$).

Measures

The Dyadic Adjustment Scale (DAS; Spanier, 1976) consists of 32 items that tap marital adjustment. Participants were asked to indicate the extent to which each item describes their current marital interaction. One dyadic adjustment score was derived by calculating the sum of the ratings on the 32 items. The scale has very good convergent validity and discriminant validity (Heyman, Sayers, & Bellack, 1994). On the basis of a comparison of a community group and a clinical group, the cutoff score between normative and problematic dyadic relations was set at 98 (Eddy, Heyman, & Weiss, 1991). The scale has been widely used among Israeli populations (e.g., Horesh & Fennig, 2000). Cronbach's alpha in the current sample was .94.

The Conflict Tactics Scale (Straus, 1979) is a self-report scale that includes 6 items measuring verbal aggression (e.g., insults or swearing, yelling) and 13 items measuring physical aggression (e.g., throwing things; pushing, grabbing, or shoving). Participants were asked to rate how often they had perpetrated each type of aggressive behavior over the previous year, from *never* (1) to *every day* (6). Two indexes reflecting the frequencies of verbal and physical aggression were computed (none of the participants reported use of the most severe forms of physical aggression; therefore, this score was based on only 7 items). The Conflict Tactics Scale has an established internal consistency ranging from .88 to .95 in samples of husbands and wives (Straus & Gelles, 1990). Internal consistency in the current sample was .87 for verbal aggression and .92 for physical aggression.

The Index of Sexual Satisfaction (Hudson, Harrison, & Cross-

cup, 1981) is a 25-item self-report scale that taps three aspects of sexual satisfaction: personal sexual satisfaction, satisfaction with a partner's sexuality, and satisfaction with a sexual interaction. Participants indicated how often they are satisfied on a Likert-like scale ranging from 1 (*rarely*) to 5 (*most of the time*). Each participant was given a total score based on the mean of the 25 items. The Index of Sexual Satisfaction has high reliability and good construct validity (Hofmeyr & Greeff, 2002). Internal consistency in the current sample was .93.

Results

Marital Relations

We compared the following aspects of marital relations among the three groups of veterans: marital adjustment, spousal aggression, and sexual satisfaction. Table 1 presents the means, standard deviations, and F values for each aspect of marital relations.

Table 1 shows a consistent pattern. In all but one of the measures (verbal aggression), the former POWs with PTSD fared significantly worse than the other two groups. No significant differences on any of the measures were found between the former POWs without PTSD and the control group veterans. However, the former POWs without PTSD ranked between the other two groups on marital adjustment, verbal aggression, and sexual satisfaction. In addition, the percentage of former POWs with PTSD (47.6%) who scored below the 98-point DAS cutoff was significantly larger than that of former POWs without PTSD (21.3%) and control group veterans (10.9%), $\chi^2(2, N = 151) = 15.30$, $p < .001$.

Predicting Marital Adjustment Among Former POWs: A Multivariate Model

An examination of the correlations between the study variables among participants in the former POW group revealed that years of marriage and number of children did not correlate significantly with the DAS score. The number of PTSD symptoms reported by the participants correlated with verbal aggression ($r = .41$, $p < .001$), physical aggression ($r = .23$, $p < .05$), sexual satisfaction ($r = -.27$, $p < .001$), and marital adjustment ($r = -.43$, $p < .001$). Verbal aggression correlated highly with physical aggression

Table 1
Marital Relations Comparison Between Groups of Veterans

Variable	Control veterans		POWs without PTSD		POWs with PTSD		$F(2, 211)$	Group comparisons
	M	SD	M	SD	M	SD		
Marital adjustment: DAS	121.75	18.59	115.41	19.14	96.57	24.64	14.34**	a, b > c
Spousal aggression								
Verbal	1.61	1.59	2.30	1.88	2.60	1.98	5.20*	a < c
Physical	0.17	0.62	0.16	0.57	1.08	2.53	8.64**	a, b < c
Sexual satisfaction	4.03	0.61	3.71	0.61	3.12	0.67	19.03**	a, b > c

Note. The group comparisons column compares the mean level of the variable in each group. POWs = prisoners of war; PTSD = posttraumatic stress disorder; DAS = Dyadic Adjustment Scale; a = control veterans; b = POWs without PTSD; c = POWs with PTSD. * $p < .01$. ** $p < .001$.

sion ($r = .73, p < .001$), sexual satisfaction ($r = -.37, p < .001$), and DAS ($r = -.63, p < .001$). Physical aggression correlated negatively with DAS ($r = -.35, p < .001$), and sexual satisfaction correlated positively with DAS ($r = .57, p < .001$).

We conducted a hierarchical regression analysis to examine the unique and combined contributions of spousal aggression and sexual satisfaction to the former POWs' marital adjustment, beyond the contribution of PTSD symptoms. In the first step, we entered the number of PTSD symptoms. In the second step, we entered sexual satisfaction, and to avoid multicollinearity, we entered only one type of aggression. We chose verbal aggression because of its wider variability.

Together, the variables explained 53.4% of the variance in the former POWs' dyadic adjustment, $F(1, 87) = 19.73, p < .001$. The PTSD symptoms explained 17.7% of the variance. More PTSD symptoms were associated with poorer marital adjustment ($\beta = -.43, p < .001$). Verbal aggression and sexual satisfaction explained an additional 35.7% of the variance. The more frequent the former POW verbal aggression ($\beta = -.43, p < .001$) and the lower his sexual satisfaction ($\beta = .37, p < .001$), the poorer was his marital adjustment.

Discussion

With regard to our first aim, the findings support the view that the marital problems of former POWs are related to PTSD symptoms. The findings show that the former POWs with PTSD reported significantly poorer marital adjustment, heightened physical aggression, and less sexual satisfaction than did the former POWs without PTSD and the control group veterans. In addition, the former POWs with PTSD were more than twice as likely to score below the cutoff point between normative and problematic marital relations as were the former prisoners without PTSD.

The findings are consistent with those of Cook et al. (2004), who revealed that former POWs with PTSD have poorer marital relations than their non-POW counterparts. In addition, the findings indicate that combat veterans with PTSD have more troubled marital relations (Jordan et al., 1992), are more prone to spousal aggression (e.g., Beckham et al., 2000), and experience less sexual satisfaction than their counterparts without PTSD (e.g., Kotler et al., 2000).

In addition, although the differences between the former POWs without PTSD and the other two groups were insignificant, this group ranked between the other two groups on marital adjustment, verbal aggression, and sexual satisfaction. Compared with the control group veterans, former POWs without PTSD were twice as likely to score below the DAS cutoff. These findings suggest that some of the difficulties stem from the captivity experience itself. Further research among larger samples of former POWs with PTSD and former POWs without PTSD could enhance understanding of this issue.

With regard to our second aim, the findings show that PTSD and related behaviors (verbal aggression and sexual dissatisfaction) contributed significantly to the variance in

marital relations. Verbal aggression and sexual dissatisfaction explained about one third of the variance, beyond the variance explained by PTSD (about 25%). This finding is consistent with studies that have revealed the detrimental impact of verbal violence (Haj-Yahia, 2002) and sexual dissatisfaction (Tuinman, Fleeer, Sleijfer, Hoekstra, & Hoekstra-Weebers, 2005) on marital relations in a variety of populations. Our result highlights the detrimental impact of features that are associated with PTSD but that are not part of the PTSD diagnosis on the marital adjustment of former POWs.

Several limitations of the study are noteworthy. First, PTSD among former POWs was assessed solely on the basis of self-report questionnaires. Previous findings, however, have shown a high degree of convergence between assessments based on these self-reports and those made by clinicians (Solomon et al., 1993). Second, the study was based only on male participants' self-reports and did not include their partners' reports. Third, a comparison group of non-POW veterans with PTSD could have strengthened the study design. Additionally, because this was a cross-sectional study, the possibility that marital relations also affected the severity of the PTSD and related features cannot be ruled out. Nor can we rule out the possibility that both the men's susceptibility to PTSD and the quality of their marital relations were affected by some other shared factor, such as attachment (Dieperink, Leskela, Thuras, & Engdahl, 2001).

In terms of practice, the findings indicate that former POWs should not be viewed as a uniform, undifferentiated group and that those with PTSD require special attention. The findings also have implications for the treatment of PTSD victims. Most treatments of PTSD focus on the victim's trauma symptoms (e.g., exposure therapy). The finding that PTSD plays a role in marital maladjustment suggests that close attention should be paid to the marital relations of the casualties. This is important both for the marriage and for the alleviation of PTSD symptoms (Tarrrier, Sommerfield, & Pilgrim, 1999).

References

- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.
- Beckham, J. C., Moore, S. D., & Reynolds, V. (2000). Interpersonal hostility and violence in Vietnam combat veterans with chronic posttraumatic stress disorder: A review of theoretical models and empirical evidence. *Aggression and Violent Behavior, 5*, 451-466.
- Bernstein, M. (1998). Conflicts in adjustment: World War II prisoners of war and their families. In Y. Danieli (Ed.), *International handbook of multigenerational legacies of trauma* (pp. 119-124). New York: Plenum Press.
- Cook, J. M., Riggs, D. S., Thompson, R., Coyne, J. C., & Sheikh, J. I. (2004). Posttraumatic stress disorder and current relationship functioning among World War II ex-prisoners of war. *Journal of Family Psychology, 18*, 36-45.
- Dent, O. F., Tennant, C., Fairley, M. J., Sulway, M., Broe, G. A., Jorm, A. et al. (1998). Prisoner of war experience: Effects on wives. *Journal of Nervous and Mental Disease, 186*, 231-237.

- Dieperink, M., Leskela, J., Thuras, P., & Engdahl, B. (2001). Attachment style classification and posttraumatic stress disorder in former prisoners of war. *American Journal of Orthopsychiatry*, *71*, 374–378.
- Eddy, J. M., Heyman, R. E., & Weiss, R. L. (1991). An empirical evaluation of the dyadic adjustment scale: Exploring the differences between marital “satisfaction” and “adjustment.” *Behavioral Assessment*, *13*, 199–220.
- Evans, L., McHugh, T., Hopwood, M., & Watt, C. (2003). Chronic posttraumatic stress disorder and family functioning of Vietnam veterans and their partners. *Australian and New Zealand Journal of Psychiatry*, *37*, 765–772.
- Frueh, C. B., Henning, K. R., Pellegrin, K. L., & Chobot, K. (1997). Relationship between scores on anger measures and PTSD symptomatology, employment, and compensation-seeking status in combat veterans. *Journal of Clinical Psychology*, *53*, 871–878.
- Haj-Yahia, M. (2002). The impact of wife abuse on marital relations as revealed by the second Palestinian national survey on violence against women. *Journal of Family Psychology*, *16*, 273–285.
- Heyman, R. E., Sayers, S. L., & Bellack, A. S. (1994). Global marital satisfaction versus marital adjustment: An empirical comparison of three measures. *Journal of Family Psychology*, *8*, 432–446.
- Hofmeyr, D. G., & Greeff, A. P. (2002). The influence of a vasectomy on the marital relationship and sexual satisfaction of the married man. *Journal of Sex & Marital Therapy*, *28*, 339–351.
- Horesh, N., & Fennig, S. (2000). Perception of spouses and relationships: A matched control study of patients with severe affective disorder in remission and their spouses. *Journal of Nervous and Mental Disease*, *188*, 463–466.
- Hudson, V. W., Harrison, D. F., & Crosscup, P. C. (1981). A short form scale to measure sexual discord in dyadic relationship. *Journal of Sex Research*, *17*, 157–174.
- Jordan, B. K., Marmar, C. R., Fairbank, J. A., Schlenger, W. E., Kulka, R., Hough, R. L., et al. (1992). Problems in families of male Vietnam veterans with posttraumatic stress disorder. *Journal of Consulting and Clinical Psychology*, *60*, 916–926.
- Kotler, M., Cohen, H., Aizenberg, D., Matar, M., Loewenthal, U., Kaplan, Z., et al. (2000). Sexual dysfunction in male posttraumatic stress disorder patients. *Psychotherapy and Psychosomatics*, *69*, 309–315.
- Letourneau, E. J., Schewe, P. A., & Frueh, C. B. (1997). Preliminary evaluation of sexual problems in combat veterans with PTSD. *Journal of Traumatic Stress*, *10*, 125–132.
- Neria, Y., Solomon, Z., Ginzburg, K., Dekel, R., Enoch, D., & Ohry, A. (2000). Posttraumatic residues of captivity: A follow-up of Israeli ex-prisoners of war. *Journal of Clinical Psychiatry*, *61*, 39–46.
- Solomon, Z., Benbenishty, R., Neria, Y., Abramowitz, M., Ginzburg, K., & Ohry, A. (1993). Assessment of PTSD: Validation of the revised PTSD inventory. *Israeli Journal of Psychiatry Relation Science*, *30*, 110–115.
- Spanier, G. B. (1976). Measuring dyadic adjustment: New scales for assessing the quality of marriage and similar dyads. *Journal of Marriage and the Family*, *38*, 15–28.
- Straus, M. A. (1979). Measuring intrafamily conflict and violence: The Conflict Tactics (CT) Scales. *Journal of Marriage and the Family*, *41*, 75–88.
- Straus, M. A., & Gelles, R. J. (1990). *Physical violence in American families: Risk factors and adaptations to violence in 8,145 families*. New Brunswick, NJ: Transaction Publishers.
- Sutker, P. B., Allain, A. N., & Winstead, D. K. (1993). Psychopathology and psychiatric diagnoses of World War II Pacific theater prisoner of war survivors and combat veterans. *American Journal of Psychiatry*, *150*, 240–245.
- Tarrier, N., Sommerfield, C., & Pilgrim, H. (1999). Relatives expressed emotion and PTSD treatment outcome. *Psychological Medicine*, *29*, 801–811.
- Tuinman, M. A., Fleeer, J., Sleijfer, D. T., Hoekstra, H. J., & Hoekstra-Weebers, J. E. (2005). Marital and sexual satisfaction in testicular cancer survivors and their spouses. *Supportive Care in Cancer*, *13*, 540–548.
- Ursano, R. J. (1981). The Vietnam era prisoner of war: Pre-captivity personality and the development of psychiatric illness. *American Journal of Psychiatry*, *138*, 315–318.

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