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Anxiety, Stress, and Coping, 1995, Vol. 8, pp. 203-213
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MARITAL INTIMACY, FAMILY SUPPORT, AND SECONDARY TRAUMATIZATION: A STUDY OF WIVES OF VETERANS WITH COMBAT STRESS REACTION

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(Received 12 *April* 1995)

The main aim of the study was to assess the role of family variables in the process of secondary traumatization among wives of post-traumatic veterans. We compared a sample of 49 wives of Israeli veterans with combat stress reaction (CSR) from the 1982 Lebanon War with a sample of 31 wives of Israeli veterans who fought in the war without developing CSR. We assessed their psychological reactions to the war, their health status six years later, and their reported levels of marital intimacy and family support after the war. When compared with controls, wives of veterans with CSR reported more negative emotions and lower perceived intimacy after the war, and greater severity of psychiatric and somatic symptoms six years later. Results also indicate that the greater the perceived marital intimacy, the less the negative emotions wives of veterans with CSR felt after the war and the better their health status six years later. In addition, wives of veterans with CSR who reported having received more support from their families after the war reported more anxiety and hostility than wives who received less support. The roles of marital intimacy and family support in the process of secondary traumatization were discussed.

KEY WORDS: Traumatization, social support, combat, stress, intimacy.

Participation in combat has been found to have pathogenic effects (Grinker & Spiegel, 1945; Stauffer et aI., 1949; Solomon, 1993). The most common psychological disturbance during battle is the combat stress reaction (CSR; Solomon, Benbenishty, & Mikulincer, 1988) - a psychological breakdown on battlefield. Prior studies (Solomon, Weisenberg, Schwarzwald, & Mikulincer, 1987) indicate that CSR may in many cases crystallize after war into posttraumatic stress disorder (PTSD).

Combat stress reactions bring about long term changes that may affect not only the veteran, but also his "significant others" (e.g., wives and children). Theoretical and clinical observations suggest that people who come into intimate contact with a trauma victim may experience negative emotions and may become victims of "secondary traumatization" (Figley, 1983; Rosenheck & Thompson, 1986). However, most of the reports regarding spouses of trauma victims are based on small and non-representative samples (see Coughlan & Parkin, 1987; Lyons, 1986; Maloney, 1988; Shehan, 1987; Verbosky & Ryan, 1988; Williams, 1980). In one of the most extensive studies of Vietnam veterans, Kulka et aI. (1988) found that

partners of veterans with PTSD experience considerably more long-term emotional upset than partners of veterans without PTSD. Similar findings were found among wives ofIsraeli veterans with PTSD who participated in the 1982 Lebanon War (Solomon et aI., 1993).

Secondary traumatization has received only limited attention and little is known about the process and variables that play a role in bringing it about. The purpose of the present study is to assess two family relationship characteristics that may participate in the process of secondary traumatization: marital intimacy and perceived support from family of origin. The impact of the family on health has already been demonstrated in a number of studies (Fisher, Terry, & Random, 1990; Fisher, Ransom, & Terry, 1993). For example, Billings and Moos (1984) and Holahan and Moos (1981) found that family cohesiveness and intimacy are a reliable predictors of psychological adjustment. Brown, Birley, and Wing (1972) and Vaughn and Leff (1976) have demonstrated the influence of the quality of emotional relationships within the family on the course of schizophrenic and depressive disorders.

The emotional quality of the family environment has also been associated with combat-related psychopathology (Hen din & Haas-Pollinger, 1984; Kadushin & Boulanger, 1981). Marital intimacy has been found to be an important predictor of civilian reintegration among both World War II veterans (Hill, 1949) and POWs from the Vietnam war (McCubbin et aI., 1975) and of psychiatric symptomatology and problems in functioning (Solomon, Mikulincer, Fried, & Wosner, 1987; Solomon, Waysman, & Mikulincer, 1990). The above findings relate only to the primary victim - the veteran himself. No study has yet been conducted regarding the association between the quality of relationships within the family and the status of wives of veterans with CSR. Family environment may, however, be associated with wives' coping with their husbands' trauma and with their adjustment to the post-traumatic reality (see Hobfoll, & London, 1986; Hobfoll, London, & Orr, 1988).

As reviewed earlier, clinical observations suggest that wives of veterans with PTSD often report feeling overwhelmed by the pressures of the relationship as well as by the fact that husbands' cannot resume their prewar responsibilities (Herndon & Law, 1986). According to Williams (1980), wives of veterans with PTSD tend to become caught in a "compassion trap" in which they sacrifice too many of their own needs for the rest of the family. Under these circumstances, the presence of a stable, intimate relationship could help wives to justify this sacrifice and make it easier for them to take the above responsibilities. Moreover, the availability of support from other family members may allow the division of responsibilities, and alleviate the wife's overwhelming burdens. Without marital intimacy or family support, wives are left to cope on their own with the post-traumatic reality. This may exacerbate negative emotions and psychopathological reactions.

In the current report, which is part of a larger study (Solomon et aI., 1993), we compared a sample of wives ofIsraeli veterans with CSR from the 1982 Lebanon War with a sample of wives ofIsraeli veterans who participated in the Lebanon war without developing CSR. We assessed (1) wives' long-term emotional reactions six years after the war, (2) their post-hoc recollections of how they reacted immediately after the war, and (3) their recollections of the degree of marital intimacy and support from family of origin immediately after the war. Our hypotheses were (1) wives of veterans with CSR will show stronger negative emotional reactions than

wives of veterans without CSR, and (2) recollections of greater marital intimacy and support from family of origin will be related to women's less negative reactions.

METHOD

Participants

This study is part of a larger research project on wives of combat veterans (Solomon et aI., 1993). Participants in the overall sample (Solomon et aI., 1993) completed a comprehensive questionnaire, and a subsample (about one-third of the entire sample) was randomly selected to be interviewed. The present study reports only the data for those interviewed. All women were married prior to the Lebanon War and still married six years later at the time of the study.

The CSR group consisted of 49 wives of veterans with CSR of the 1982 Lebanon War. Women were included in this group based on the following husband's criteria: (a) husband's participation in front-line battles during the Lebanon War; (b) a referral for psychiatric intervention made by the soldier's battalion physician during the war; (c) a diagnosis of CSR made on the battlefield by IDF clinicians trained and experienced in the diagnosis of combat-related reactions; (d) no indication in the clinician's report of serious physical injury; (e) no indications in the clinician's report of other combat related-disorders. Eligibility was determined on the basis of clinician's records.

The control group consisted of 31 wives of soldiers who fought in the Lebanon War without being diagnosed or treated for CSR during the war and without suffering any injury. The husbands of these subjects were part of a group of combat controls without CSR who had participated in previous studies of Israeli veterans of the Lebanon War (Solomon, 1993; Solomon et aI., 1987).

Chi-square tests found that the two study groups selected for the current study did not differ in the assessed sociodemographic variables. Most wives (75%) ranged in age from 23 to 36 years (median age = 32). Twelve percent had only completed eight grade, another 26% had had at least some high school, 39% had completed high school, and 23% had studied beyond high school. The majority (64%) were born in Israel; 20% were of African or Asian origin and 16% of European or American origin. They were married an average of 12.84 years at the time of the study (SD = 3.86). Chi Square tests also indicated no significant differences in sociodemographic variables between women who were interviewed and women from the larger sample who were not interviewed. This finding together with comparisons carried out on questionnaire data indicate that the current subsample was not biased.

Procedure

In the Winter of 1988, letters were sent to potential participants explaining the aims of the study and inviting them to participate. The study was presented as an investigation of the impact of war on families of combat veterans, aimed at expanding the IDF's knowledge of these families' needs for the purpose of planning appropriate services. Initial consent to participate in the study was secured via

telephone two weeks after sending the letters, and a mutually convenient time was set up to meet the women in their homes. Since the research was carried out by the official mental health branch of the IDF and the women provided initial consent to complete the self-report scales, there was no refusals to the interview.

Woman completed two questionnaires (SCL-90, somatic complaints) tapping their somatic and mental health status at the time of the study and were interviewed according to preset guidelines. Interviews were tape recorded and conducted by two specially trained social workers from the mental health branch of the IDF. Some questions in the interview inquired about factual details, while in other parts women were encouraged to talk freely about feelings and subjective assessments. The format was structured, but flexible. The interviews took approximately 2 hours. Interviews began by asking about the women's childhood and continued from there chronologically. Women recalled events that she, her husband and family lived through, with particular emphasis on the period of the Lebanon War and any change that may have taken place from that time to the present. Interviewers were instructed to collect any relevant data without being biased by any a priori expectation and premise. The interviews thus provide a detailed picture of these women's lives. The present article reports on three aspects covered by the interview - the level of perceived marital intimacy after the Lebanon War, the perception of support from family of origin during and after the war, and the wive's reactions to their husband's return from the war.

Measures

Interview measures. The taped pro to cols were transcribed verbatim in order to facilitate listing and categorization of the data. These written protocols were stored in personal computer files and a transcript of these files was given to two judges, who were social workers with clinical experience in treatment of both veterans and their wives. The two judges, who were not aware of the study's hypotheses as well as of the participant's group (CSR or control), read each protocol and rated the
woman's marital intimacy after the war, the perception of support from family of origin during and after the war, and her immediate reactions to the war. The judges progressed independently and made each of the ratings one by one, searching for relevant information in the transcript.

Interreliabilities between the two judges were computed, using the conservative method of evaluating percentage agreement between judges for each variable separately, namely, the percentage of participants' statements which the two judges gave the same ratings (intimacy and support ratings were given on a 4-point scale; emotional reactions ratings were given on a 5-point scale). On the whole, there was a high rate of agreement between the judges (80%). In cases of disagreement, the judges discussed the relevant items until agreement was reached.

Based on women's reports, judges rated women's level of intimacy with their partners immediately after the Lebanon War in five areas: feelings, social activities, sexual relations, ideas and intellectual interests, and leisure-time activities. These ratings were done one by one. Each item was coded on a 4-point scale ranging from
I (not at all) to 4 (very much), indicating the degree to which each area is a source of sharing and intimacy. The Alpha Cronbach coefficient for the 5 intimacy items was .74, indicating acceptable internal consistency. Thus, we computed a score of

marital intimacy by averaging the 5 items, with higher scores reflecting more marital intimacy.

Based on participants' reports, judges rated women's perception of support from their family of origin during and after the war in three areas: emotional, instrumental, material. These ratings were made separately for the perceived support from the wive's family and for the perceived support from the husband's family. Each item was coded on a 4-point scale ranging from 1 (not at all) to 4 (very much), indicating the degree to which families of origin were perceived as supportive during and after the war in each of the assessed areas. The Alpha Cronbach coefficient for the 3 items on perceived support from wive's families was. 79; the Alpha Cronbach coefficient for the 3 items on perceived support from husband's families was. 73. In both cases, the reliability coefficients indicated acceptable internal consistency. Thus, we computed two scores of perceived support by averaging the respective items, with higher scores reflecting wive's perception of more support from their own and their husband's families during and after the war.

Judges also rated 14 wives' immediate reactions to their husband's return from the war (e.g., anxiety, guilt, worry). Each reaction was coded on a 5-point scale ranging from 0 (the reaction was not mentioned) to 4 (very intense reaction). Since the 14 items reflect a wide range of emotional responses, we considered necessary to sort these reactions into more meaningful and comprehensive categories. On this basis, a factor analysis with Varimax rotation was performed on the 14 reactions. The current ratio of subjects per item (80 subjects/14 items) fitted Nunally's (1978) optimal requirement for factor analysis.

The factor analysis yielded 5 main factors (eigenvalue > 1) which explained 61 % of the variance. A Scree test also indicated that a five-factor solution is the preferred solution. Factor 1 explained 31 % of the variance and included 5 items (loading> .40) regarding anxiety reactions (anxiety, guilt feelings, death-related thoughts, worry, tension). Factor 2 explained 13% of the variance and consisted of 2 items regarding depressive reactions (crying, sadness). Factor 3 added 8% to the explained variance and consisted of 2 items regarding optimism (sense of strength, optimism). Factor 4 explained 5% of the variance and consisted of 2 items regarding fear and loneliness. Factor 5 explained 4% of the variance and consisted of 3 items concerning hostility (general anger, anger directed toward the husband, anger directed toward the army). On this basis, we computed five scores by averaging the items that loaded high in a factor. Higher scores reflect the endorsement of more anxiety, depression, loneliness, and hostility and optimism at the time of husband's return from the war.

Questionnaire measures. In order to assess wives' psychosocial status six years after the war, we asked women to complete two questionnaires on psychiatric symptomatology and somatic problems.

The Symptom Checklist 90 *(SCL90)* was employed to assess wives' psychiatric symptomatology (Derogatis, 1979). This checklist inquires about symptoms during the two weeks preceding the interview. It is composed of 90 self-report items rated on a 5-point distress scale. This scale has been factor analyzed and nine symptom dimensions had been identified (Derogatis, 1979). Participants were compared on the Global Severity Index (GSI), which reflects the severity, of all the symptoms and was computed by averaging each woman's answers on the ninety symptoms.

A 9-item self-report questionnaire was utilized to evaluate the wives' physical health. Women were asked whether they had developed any allergy, hypertension, ulcers, digestive problems, heart disease, chest pains, diabetes, stroke, or back pains during the previous year. The questionnaire was adapted from the somatic inventory used to assess PTSD veterans. Details on its psychometric properties are reported in Solomon (1988). In the present sample, the Cronbach Alpha coefficient for the 9 items was .75, reflecting appropriate internal consistency. Therefore, a total score was computed by counting the number of somatic problems they endorsed.

RESULTS

Wives' Immediate and Long-term Reactions to the War

In this section, we examine our first hypothesis on differences between study groups (CSR, control) in wives' reactions. For this purpose, we performed one-way multivariate and univariate analyses of variance (ANOVA) for study group (CSR, control) on the set of the five coded wives' immediate reactions to the war as well as on the two wives' long-term outcome measures. Means, standard deviations, and F-ratios relevant to these analyses are presented in Table 1.

Table 1. Mean, Standard Deviations, and F-ratios of wives' reactions to the war in CSR and control groups

	Control		CSR	
F(I,78)	SD	M	SD	
14.39**	(0.10)	2.05	(0.30)	2
3.17	(0.21)	2.08	(0.37)	2
7.33**	(0.33)	2.21	(0.16)	2
6.10*	(0.16)	2.06	(0.33)	2
5.55*	(0.09)	2.04	(0.48)	2
8.86**	(0.35)	0.46	(0.65)	(
6.63*	(1.03)	0.58	(1.25)	1

The multivariate analysis of variance (MANOV A) performed on wive's immediate reactions to their war yielded a significant effect for study group *(F(5,74)* = 4.59, $p < .01$). Univariate ANOVAs indicated that the effect for study group was significant for anxiety, loneliness, hostility, and optimism (See Table 1). There was no difference between groups on the depression score. Means indicated that wives of veterans with CSR felt more anxiety, more loneliness, more hostility, and less optimism immediately after their husbands' return from the Lebanon war than the wives of the veterans without CSR. It is important to note that mean

differences between the groups in wives' immediate reactions may be a reflection of the low within-group variance of the control group. Although this finding may have skewed the results, one should remember that this is an expected finding since the control group was comprised of wives of veterans who did not experience any psychological problem.

The MANOV A performed on wives' long-term health outcomes also yielded a significant effect for study group *(F(2,77)* = 4.99, $p < .01$). Univariate ANOVAs yielded significant effects for study group on both GSI and somatic complaints (See Table 1). Means indicated that wives of veterans with CSR reported more severe psychiatric symptomatology (GSI) and more somatic complaints six years after the Lebanon War than wives of veterans without CSR.

Family Relation Measures and Wives' Reactions to the War

In this section, we examine our second hypothesis on the relationship between wives' reactions and family relationship variables. For this purpose, we conducted two sets of analyses: canonical and Pearson correlations between family relation measures and wives' immediate and long-term health outcomes. Canonical correlation analysis estimates the maximal linear relationship possible between linear functions of weighted variables. It is mainly used to investigate the relation between two sets of variables, and it indicates whether this relation is significant.

The canonical correlation between family relationship and wives' immediate reactions to the war was significant *(R2* = .32, *F(15,* 154) = 4.51, $p < .01$). Pearson correlations (see Table 2) indicated that the more marital intimacy women reported having felt immediately after the war, the less anxiety and hostility and the more optimism they reported at that time. In addition, the more anxious and hostile they were, the *more* support women reported having received from their own and their husbands' family after war.

The canonical correlation between family relationship and wives' self-reported

Pearson correlations between family relation measures and wives' r

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Control			CSR			Tota	
Husb. Supp	Wife Supp	Int.	Husb. Supp	Wife Supp	Int.	Husb. Supp	Wif Sup
09	05	-08	44**	45**	- 28*	28*	30**
- 10	- 19	21	09	- 01	08	01	-09
02	-06	17	01	09	19	05	07
- 17	04	24	-05	-08	05	- 12	- 10
15	13	02	28*	29*	- 33*	29*	22*
- 19	-05	- 17	- 01	04	- 37*	-09	-04
- 11	- 19	- 01	23	20	-40*	-02	05

Notes: *'p* < .05; *"p* < .01. The decimal point was om
coefficients.

mental health status six years after the war was significant *(R2* = .29, *F(9,120)* = 3.92, $p < .01$). Pearson correlations (see Table 2) indicated that the more marital intimacy wives reported having felt immediately after the war, the less severe the psychiatric symptomatology and the lower the number of somatic illnesses they endorsed six years later.

Although no specific hypotheses were proposed, Pearson correlations were conducted separately for each study group. These analyses revealed significant correlations among wives' reactions and family relationship variables only for the CSR group (see Table 2), but not for the non-CSR group. Due to the small *N* of each group, *i-tests* did not reveal any significant difference between correlations.

DISCUSSION

When compared with controls, wives of vetarans with CSR reported having reacted with more negative emotions and less positive emotions to their husbands' return from the war, and reported greater overall severity of psychiatric symptoms as well as more somatization at the time ofthe study (six years later). These findings are consistent with a number of clinical observations made among wives of Vietnam post-traumatic casualties (e.g., Lyons, 1986, Maloney, 1988; Shehan, 1987).

As reported in an earlier study (Solomon et aI., 1993), the association between the veteran's trauma in the war and his wife's long-term reactions may suggest that living with a trauma victim may lead to a process of secondary traumatization. This may be due to the chronic stress brought on by the shift in roles which occurs in the family, with wives taking on almost total responsibility for child care and household maintenance. These burdens are often compounded by the veterans' inability to maintain satisfying relationships, which may leave their wives lonely, isolated, and vulnerable. The secondary traumatization process may also be related to wives' tendency to identify with their husbands (Maloney, 1988; Rosenheck & Nathan, 1985), and to experience in fantasy the same kind of traumatic events that the veterans actually lived though.

The relationship between the veterans' CSR and their wives' emotional reactions to their return from the war may imply that the secondary traumatization process evolved from the first encounter with the post-traumatic reality. Alternatively, one can speculate that wives may identify to a certain degree with their husbands' traumatic-related ideation and imagery, their reduction in self-esteem, and their loss of the illusion of safety. Whatever explanation is appropriate, one should take into account the fact that these reports of the wives' immediate reactions to the war were recorded six years later, and that their memories may, therefore, be coloured by their mental health status or influenced by selective recall of events (Brown & Harris, 1978).

The findings also indicate that recollections on marital intimacy immediately after the war was inversely related to wives' negative emotional reactions. Marital intimacy may mitigate the process of secondary traumatization in various ways. On a cognitive level, an intimate relationship may help wives redefine their roles and responsibilities within the family. The fact that women can speak freely about their problems and doubts may help them to understand what is expected of them and to plan their lives in accordance with the new roles. On an emotional level, an

intimate relationship may bolster the wives' anxiety and hostility by assuring them that, whatever their current difficulties, they are needed, valued, and respected. Alternatively, marital intimacy may mitigate the distress of veterans with CSR, reducing the likelihood of a secondary traumatization process. An intimate relationship may prevent the veteran from considering himself a failure, helping him to understand that what happened was a normal reaction to a traumatic situation as found by Hobfoll, London & Orr (1988).

Because our study did not examine the specific components of marital intimacy, we do not know which of the above aspects of intimacy was most influential. Moreover, our retrospective data cannot negate the possibility that the wives' current mental state may influence the level of marital intimacy they reported. To the extent that this is the case, low levels of marital intimacy may indicate either objective family conditions or point to wives' mental distress.

Contrary to our hypothesis, wives of veterans with CSR who reported having received more support from their extended families after the war reported more anxiety and hostility than wives who received less support. While this finding can only be explained in a *post hoc* fashion, it is consistent with Hobfoll and London's (1986) finding that Israeli women who received more support during the Lebanon War reported higher anxiety than those who received less support. **In** Hobfoll and London's terms, we are witnessing the action of a "pressure-cooker," by which the wives' interaction with extended family members, who are in the same stressful situation and may have also reacted with negative emotions to the veteran with CSR, intensified the wives' distress. **In** this sense, the presence of additional distressed family members may have prevented the denial of the husband's problematic situation, activating self-preoccupative worries and anxiety feelings. This situation may resemble what Lavee, McCubbin, & Olson (1987) call a "pile-up of demands."

Alternatively, the above finding may be due to a link between "requested support" and "received support." It is possible that women who become anxious and hostile after the return of their husbands may have requested more support from their families of origin. If this is the case, the findings may mean that family support is a consequence rather than an antecedent of wives' emotional reactions.

From a family perspective, some complementary interpretations of the above findings may be also offered. First, it is possible that wives established a life style of greater independence and autonomy during the war, and that the return of the veteran complimented by family members' encouragement of support might jointly threatened the current situation, thus creating anxiety and hostility. **In** addition, family members may present a set of norms and expectations which are often not respectful of the changing nature of the wives who sometimes became stronger, more independent and autonomous and thus there are value conflicts between the family of origin and the wives. These potential scenarious suggest that there may be a dynamic interplay between family support and the wives' needs, and emphasize that the assumption that support is always beneficial should be counterbalanced by an analysis of the possible costs of receiving family support. This line of interpretation should be examined in future studies.

The data from the present study and the proposed interpretations may provide further clarification of the secondary traumatization process. **In** general, it seems that wives of veterans with CSR are at risk of developing mental health problems, and therefore could benefit from follow-up and treatment programs. Further

research is needed in order to specify the personality, family, and social moderators which can contribute to wives' adjustment to living with post-traumatic persons.

Author's Notes

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This study is part of a larger project that was funded by grants from the U.S. National Institute of Mental Health (#1 ROI MH46383-01) and from the Israel Ministry of Health's Chief Scientist's Committee and the Rehabilitation Branch of the Israel Ministry of Defense.

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