

In the Aftermath of Trauma: A Community Study of Bedouin IDF Servicemen and Their Families

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ABSTRACT

Background. Data are scarce on the effects of trauma and post-traumatic stress disorder (PTSD) on minority servicemen from non-Western communities and the indirect impact on their spouses and other family members.

Method. Interviews were completed with Bedouin servicemen in the Israel Defense Forces (N=317) and co-resident wives (N=129) and mothers (N=67).

Results. Servicemen had high levels of trauma exposure and PTSD. Aggression displayed by married servicemen fully mediated the strong and positive relationship between their PTSD and wives' post-traumatic, depressive, and somatic symptoms. Mothers' more severe emotional distress was unrelated to sons' diagnostic status, but positively associated with sons' aggression.

Limitations. These include sampling method, cross-sectional design, retrospective reports, and absence of data on onset of symptoms.

Conclusions. Profound cultural barriers to care require a proactive approach towards non-Western servicemen, including (1) identification and initial treatment of trauma-related symptoms before discharge, (2) community education, and (3) training primary care physicians to address PTSD and related problems among servicemen and their families.

It has been suggested that veterans from minority ethnic backgrounds experience higher rates of post-traumatic stress disorder (PTSD) following war-zone duty than those from non-minority origins (1). However, findings from studies on U.S. veterans have been inconsistent and controversial, suggesting that the occasional observed differences in rates of PTSD among Latinos, African Americans, American Indians, and Asian Americans, compared to non-Latino whites are better explained by factors other than cultural (2). While data on the traumatic experiences and post-traumatic reactions of refugees from non-Western backgrounds have been accumulated, little is known about minority military or peacekeeping personnel from non-Western communities. Questions on the cross-cultural validity of PTSD and the urgent need to emphasize the role of culture in diagnostic considerations have been laid at the doorstep of the DSM-V committee (3). Furthermore, although the vicarious effect of combat duty and PTSD has been increasingly acknowledged (4), little is known about the well-being of spouses and other family members of servicemen in non-Western settings.

The current paper provides an overview of findings from a community-based study aimed to explore the trauma exposure of Bedouin men serving in the Israel Defense Forces (IDF) and the ensuing psychiatric and health-related effects on them and on the women co-habiting with them.

THE BEDOUIN ISRAELI COMMUNITY

The Northern Bedouin tribes in Israel relinquished their nomadic lifestyle and settled in permanent communities under the British Mandate (5), forming alliance with the emerging Jewish state and participating in its security efforts since its establishment. Although of Arab ethnic-

Acknowledgement

The study was funded by a grant from the United Jewish Appeal Federation of New York as part of their community-based trauma relief initiative.

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ity and Muslim faith, the Bedouins remain separated by choice from other Arab sub-groups. They marry young, in unions prearranged within the extended patriarchal family. Although educated, women are commonly not gainfully employed (6), but rather stay socially confined to the tribal circle and remain subordinate in the home (7).

Multiple factors place the Bedouin servicemen at a high risk of developing trauma-related problems. First, they constitute the only non-Jewish group who serve in the IDF strictly on a voluntary basis and primarily in combat units (8). In addition, they are of the same ethnicity and religion as the Palestinians in the West Bank and Gaza, where most military activities in the last 20 years have taken place. This type of affinity with the enemy has been singled out as a potential added risk minority soldiers face in deployment to conflict areas, especially given the possibility of civilian casualties (9). The growing ambivalence towards service in the IDF (10) is further fueled by the rising power of Muslim religiosity in this secular community, and the propagated view that service in an infidel army is a sin against the Koran (11). Similarly to other low status minority groups, Bedouin veterans face limited access to the type of resources that buffer the impact of traumatic experiences and have limited ability to employ whatever resources they do have in the broad community (12). Finally, cultural values and norms form barriers to help-seeking behavior and use of mental health services (13). Suppression of emotions is expected, and the expression of emotional pain is a sign of character weakness or pathological behavior. At the community level, the grieving rituals are limited to setting up a "grieving tent," held open for visiting mourners for three days only. On the fourth day, routine functioning is resumed. Traditionally, there are no anniversary ceremonies or memorial days, as Islamic tradition admonishes adherents for protesting "God's will" by overt and excessive lamentation over the deceased (14). Adapting Jewish customs, memorial grounds dedicated for the Bedouin fallen soldiers were established by the State in the late 1990s, where ceremonies have since been held annually on Israel's Memorial Day. Nevertheless, many community members do not attend.

Consequently, it is apparent that a better understanding of the trauma response in this previously unstudied group is central for early identification of trauma-related problems and relevant treatment approaches. This paper offers an overview of our findings by including the perspectives of three different sub-samples: first will be described

the type and rate of traumatic experiences the men were exposed to and their direct impact, in terms of formal psychiatric diagnoses, symptoms of post-trauma and depression, physical health and services utilization. Secondly, the vicarious effect of living with husbands traumatized and suffering from PTSD will be presented through wives' emotional and somatic symptoms and health services utilization, with special consideration given to the role of husbands' aggression. Finally, the wellbeing of Bedouin mothers whose unmarried sons reside with them in the parental home will be described and contrasted with the condition and experiences disclosed by the wives.

METHODS

PARTICIPANTS

The study was part of the Bedouin Community Outreach and Needs Assessment Project. The Bedouin village selected for participation is located in Israel's North District; it is among the largest, includes five different tribal families, and functions as a local council.

A total of 372 men were identified, of whom 348 (94%) agreed to participate and 317 (91%) completed the interviews. Permission to interview the women, initially requested from the men, yielded completed interviews with 129 wives and 67 mothers (for single men). Data regarding women's response/refusal rate are not available.

The 196 women were related to 221 men who represented 70% of all male participants. The majority of women (91.3%) were related to a single male participant, either husband or son, residing with them in the same household. Of the 17 women related to more than one participant, 12 had two, three, or four sons in the study and five had a husband in addition to one or more sons. For the purposes of statistical analyses, a single man was paired with each of these 17 women. The selection was guided by the severity of men's post-traumatic symptoms as follows: men diagnosed with PTSD were selected over those with other DSM disorders ($n=4$); in the absence of PTSD, men with other DSM disorders were selected over those with no diagnosis ($n=3$: Major Depressive Disorder (MDD), MDD with alcohol abuse; MDD with General Anxiety Disorder). Finally, among men with no DSM diagnosis, those with higher scores on the symptom scales for post-traumatic stress and depression were included ($n=10$).

PROCEDURES

Door-to-door enrollment of potential participants from households identified as having members in IDF service

was carried out by recruiters representing all five tribal families in the village. Study descriptions in Hebrew and Arabic were handed out to all eligible households with a letter from the principal investigators explaining the study's goals and guaranteeing confidentiality of information. Contact information sheets were filled for those who agreed to participate. Potential participants were then contacted by phone by the interviewers. Referrals to additional households were made by the participants themselves. Up to six contact attempts were made until a potential participant was considered to have declined participation.

Following face-to-face explanation of confidentiality issues and the study's goals, participants completed informed consent forms approved by the hospital's Institutional Review Board. All forms and instruments were back-translated into Arabic to ensure accuracy of translation. Following the conclusions from the elaborate preparations and key-informant interviews that preceded the data collection phase of the study, men were interviewed in Hebrew by two Jewish female graduate psychology students and the women were interviewed in Arabic by two Christian-Arab female undergraduate law students. Interviews were conducted in the homes, separately for men and women. The interviewers were trained in conducting semi-structured and culturally-sensitive interviews by YC and another researcher. The women's interviewers were blind to men's responses. Questions were read aloud and responses hand-recorded by the interviewers. Monetary compensation equivalent to US\$25 was received at the end of the 1.5-hour interview. Only the men were psychiatrically assessed for the presence of Diagnostic and DSM disorders. Those identified as suffering from PTSD or any other Axis I DSM disorder were offered a meeting with the corresponding author and a letter describing the study, the diagnostic process and its conclusion. Launched in 2003, the data collection phase of the study lasted approximately 18 months.

MEASURES

Current financial status was rated on an ordinal scale from Excellent (1) to Poor (5). A binary variable was created by combining replies of "fair and "poor" to indicate poor financial status (1) versus replies of "good," "very good," "excellent" (0).

Experiences of traumatic events were described on a list of 13 events corresponding to the broader definition of DSM-IV-TR Criterion A1 (15). These included combat (for the men), severe car accidents, other severe acci-

dents, sudden death of a close friend/relative, risk to one's own life or the life of a close friend/relative, witnessing or experiencing assault, domestic violence or physical abuse in childhood and any other traumatic experiences. For women, an item referring to sexual abuse was included.

The Structured Clinical Interview for Axis I DSM-IV Disorders (SCID; 16) Hebrew translation (17) was administered only to men to determine DSM-IV (15) diagnoses. The 3-level variable of husbands' diagnostic group (PTSD, Other DSM, No Diagnosis) was transformed for the inferential analyses to two dummy variables, the first comparing PTSD to no disorder, the second comparing other DSM disorders to no disorder.

The Screen for Post-traumatic Stress Symptoms (SPTSS) (18) a brief self-report screening instrument for PTSD symptoms, composed of 17 items, rated on a 10-point scale from "Never" (0) to "Always" (10) in response to "how much that thing has happened to you during the past two weeks." Designed for use in clinical and non-clinical settings, the SPTSS employs simple language and is not keyed to a single event. In a validation study, the performance of the SPTSS in the men's sample indicated equal sensitivity and specificity rates of 89% vis-à-vis a SCID diagnosis of PTSD, at a cut point of 5.50 (19).

The Hopkins Symptom Checklist-25 (HSCL-25) (20), used to assess symptoms of anxiety and depression, is composed of 10 symptoms of anxiety and 15 symptoms of depression, rated on a 4-point scale ranging from "not at all" (1) to "extremely" (4). The Arabic version (21) was well-received among Palestinian primary health care patients in the Gaza Strip (22). Internal consistency in our sample was very good for both men (Cronbach's $\alpha = .95$) and women (Cronbach's $\alpha = .89$)

Substance abuse was assessed only for the men, addressing cigarettes, beer, wine and hard liquor. As suggested by the key-informants, questions about drug use were avoided for two primary reasons: First, asking participants who are still in service a question about an illegal activity may inhibit cooperation and introduce distrust, and secondly, alcohol is considered to be the substance of choice and more prevalent in this community.

Physical health, health related functioning and utilization of health services were assessed by eliciting information on the presence of somatic symptoms and self-perceptions of health and wellbeing, as well as by items adapted from the *SF-36* (23) describing self-perceived limitations in work, family, and daily functioning due to physical and emotional health. Additional items referred to utilization of primary care and specialty health services.

Feelings of guilt and shame were assessed (only with men) by four questions rated on a scale between 0 (“not at all”) to 10 (“extremely”): *Degree of guilt and remorse regarding service-related events*; *Degree of shame related to current functioning*; *Degree of shame related to others thinking there is something wrong with you*; *Degree that shame interferes with your ability to do things and act as you wish*. Internal consistency was good (Cronbach’s $\alpha=.82$).

Men’s aggression, as reported by the women, was constructed as an index measure from three items describing behaviors that increase in level of volatility: 1. irritable, angry or impatient reactions; 2. breaking things, slamming doors or losing temper (verbally); 3. physical fights. The choice of these items was guided by concerns that women would refuse to answer a more direct question about husbands’ aggressive behavior. The frequency of each item was rated on an ordinal scale from “Never” (0) to “Most of the time” (4). Scores on all three items were added to construct a continuous measure of men’s aggression in the past six months, ranging 0-12. Internal consistency was fair (Wives: Cronbach’s $\alpha=.77$; Mothers: .57).

RESULTS

SUMMARY OF FINDINGS FROM THE MEN’S SAMPLE (N=317)

As described elsewhere (24) the 317 men averaged 30 years of age, were mostly married (57%) with an average of 3.4 children. The vast majority (75%) served in combat positions as (in descending order) trackers, in the infantry, in specialized units trained in urban fighting and in the border police. Those in combat positions tended to report nearly two years less of schooling and to stay, on average, four years longer in service. Overall, the average length of service was 70 months; 19% of the men have served less than one year, 43% between 1-4 years, and 38% between 5-27 years. Fifty-eight percent were discharged at the time of the interviews. Of those, 38% were unemployed. Very few (12%) were receiving benefits for some service-related disability.

The level of trauma exposure in this sample was very high, with three of four men exposed to at least one type of traumatic event of sufficient severity to potentially cause PTSD, and additional 22% reporting extremely stressful events. War trauma was reported by nearly 70% of the total sample and by 90% of those traumatized. SCID-based DSM-IV Axis I psychiatric disorders were identified in 27% of the participants and included: PTSD, diagnosed in 14.5% (20% of all traumatized); MDD alone or co-morbid with anxiety disorder was

diagnosed in 5.4% of respondents; alcohol abuse - in 6%, and other diagnoses, mainly general anxiety disorder and panic disorder, were diagnosed in 1%. Only two participants suffered from psychotic-like symptoms in conjunction with PTSD and substance abuse, respectively. More than half of the participants with PTSD manifested co-morbidity with MDD.

Traumatized respondents, especially if they also had PTSD, were more likely to be married, to have served for longer periods and in combat units. Those with PTSD were significantly more likely to have been discharged by the time of the interview than respondents without PTSD, whether traumatized or not. Very few were diagnosed prior to the study and most have never discussed their traumatic experiences before (24).

PTSD was associated with rates of post-traumatic and depression symptoms placing this group at severity levels similar to those exhibited by psychiatric inpatients (18) and refugees and asylum seekers attending a psychiatric outpatient clinic (25).

The findings consistently identified PTSD and not trauma exposure alone as the determining factor in the impairment of emotional and physical health among the men studied. Compared to those traumatized without PTSD, participants with PTSD were more likely to smoke more cigarettes and drink more beers, to view their health status as poor and worsening, to report frequent illnesses, more conditions diagnosed by a physician such as ulcers, asthma, high blood pressure and ruptured discs and to have visited primary care and specialty care clinics more frequently during the preceding six months (24). Indeed, our participants resemble more groups at-risk than community samples (26). Frequent visits to primary care and to specialty care clinics were significantly more likely to be reported by those with PTSD than those traumatized without PTSD. Lifetime hospitalization for physical health problems was reported by more than half of the sample (24).

Use of psychiatric outpatient and inpatient treatment services was reported by only 8% and 3%, respectively, of the men’s sample. Although use of these services was more prevalent among those with PTSD, the actual numbers were very low: less than half of those diagnosed by the study as suffering from PTSD and only 5% of those diagnosed with other disorders utilized mental health services.

Diagnostic status in our sample was significantly related to all shame indices so that PTSD was always associated with higher levels of guilt and shame than men with other diagnoses and no diagnosis at all (27). Except

for service-related feelings of guilt and remorse, men with other disorders were significantly different than men with no diagnoses, establishing an intermediate status for the group of non-PTSD DSM diagnoses on all shame items. Due to high inter-correlations among these items, subsequent inferential analyses employed only shame related to others' perception. Findings showed that, controlling for the effect of men's diagnostic status, shame related to others' perception was significantly associated with multiple health and functioning items, such as increased likelihood for poor or bad health status, more frequent occurrence of illness and more frequent visits to the primary care clinic, increased impairment in self-care, social relations, familial-role and daily functioning due to physical or emotional health problems (data available from corresponding author).

SUMMARY OF FINDINGS FROM WIVES' SAMPLE (N=129)

Twenty-six women were living with husbands diagnosed with PTSD, 19 had husbands diagnosed with other DSM disorders, and 84 had husbands with no diagnoses. They were similar in age which averaged 31 years, reported an average of 11 years of education, and an average of nearly four births. Compared to wives whose husbands were diagnosed with other DSM disorders and to those whose husbands did not have any psychiatric diagno-

sis, Bedouin wives living with husbands suffering from PTSD were in a poorer financial status, exhibited more elevated post-traumatic stress and depression symptoms and reported more somatic complaints. However, neither husbands' diagnostic status nor their aggression was related to wives utilization of health services (28).

In this Bedouin sample, findings clearly indicated that, accounting for wives' financial status, personal adverse experiences and husbands' trauma, the strong observed relationship between husbands' PTSD and wives' post-traumatic, depressive, and somatic distress was fully mediated by husbands' aggression (28).

COMPARISON BETWEEN MOTHERS AND WIVES

Sixty-seven mothers were interviewed for this study, all with single sons in IDF service who still reside in the family home. Independent samples *t*-tests revealed significant differences between the wives ($n=129$) and mothers ($n=67$) in age, education, and number of births (Table 1). Mothers also reported slightly more adverse/traumatic events. A series of odds ratios (ORs) from unadjusted logistic regressions provided consistent indication of mothers' poorer condition, as evidenced by their increased likelihood for lower financial status and poorer health status, more physician-diagnosed illnesses, somatic complaints and frequent utilization of primary care and

Table 1. Sample Characteristics and Comparisons between Bedouin Wives and Mothers of Men Serving in the IDF

	Total sample N=196		Wives n=129, 65.8%		Mothers n=67, 34.2%		Differences ^a
	M	SD	M	SD	M	SD	
Background characteristics							
Age	38.17	12.57	31.27	8.06	51.65	8.04	MD=-20.5*** t=-16.72 df=193
Years of schooling	8.28	4.72	10.66	3.15	3.75	3.84	MD=6.91*** t=13.49 df=194
Number of births	5.24	3.56	3.46	2.47	8.67	2.73	MD=-5.21*** t=-13.1 df=194
Sum of adverse events (out of 14)	2.00	1.42	1.85	1.37	2.28	1.50	MD=-0.43* t=-2.02 df=194
Sum of somatic complaints (out of 8)	3.73	2.54	2.85	2.26	5.43	2.18	MD=-2.58*** t=-7.67 df=194
Mean SPTSS	2.22	1.84	1.97	1.71	2.71	1.98	MD=-0.74** t=-2.72 df=194
Mean HSCL-25	1.83	0.48	1.74	0.45	2.01	0.48	MD=-0.28*** t=-3.98 df=194
	n	(%)	n	(%)	n	(%)	
Financial status (fair/poor) ^b	106	(54.4)	60	(46.5)	46	(69.7)	OR=0.38** 95% CI: 0.20-0.71
Health status (fair/poor) ^b	39	(20.0)	10	(7.8)	29	(43.9)	OR=0.11*** 95% CI: 0.05-0.24
Physician-diagnosed illnesses	61	(31.1)	18	(14.0)	43	(64.2)	OR=0.09*** 95% CI: 0.05-0.18
Frequent use of primary care services	101	(51.5)	57	(44.2)	44	(65.7)	OR=0.32*** 95% CI: 0.17-0.58
Men's aggression	96	(49.0)	68	(52.7)	28	(41.8)	OR=1.55 95% CI: 0.86-2.82

Note. IDF=Israel Defense Forces; SPTSS = Screen for Post-traumatic Stress Symptoms; HSCL-25 = Hopkins Symptom Checklist-25. a Mean Difference (MD) from *t*-tests; Odds Ratio (OR) with associated 95% Confidence Interval (CI) from unadjusted logistic regressions.

b Compared to good/very good/excellent; c Assessed by the women

* $p < .05$ ** $p < .01$ *** $p < .001$

Table 2. Type of Traumatic Experiences Reported

Type of trauma	Wives N=129	Husbands N=129	Mothers N=67	Sons N=67
Sudden death of someone close	87 (67.4%)	111 (86.0%)	51 (76.1%)	54 (80.6%)
Near death of someone close	57 (44.2%)	81 (62.8%)	28 (41.8%)	53 (79.1%)
Witnessed severe assault of a stranger	27 (20.9%)	41 (31.8%)	20 (29.9%)	19 (28.4%)
Other	21 (16.3%)	27 (20.9%)	13 (19.4%)	6 (9.0%)
Car Accident	15 (11.6%)	57 (44.2%)	12 (17.9%)	13 (19.4%)
Witnessed domestic violence as a child	13 (10.1%)	21 (16.3%)	9 (13.4%)	9 (13.4%)
Beaten up by someone close	8 (6.2%)	35 (27.1%)	----	15 (22.4%)
Someone threatened to hurt or kill you	6 (4.7%)	30 (23.3%)	1 (1.5%)	13 (19.4%)
Life-threatening illness	6 (4.7%)	1 (0.8%)	14 (20.9%)	----
Severe physical punishment in childhood	4 (3.1%)	9 (6.9%)	2 (3.0%)	2 (8.0%)
Other severe accident	4 (3.1%)	16 (11.6%)	5 (7.5%)	3 (4.5%)
Stalked or harassed	3 (2.3%)	30 (23.3%)	1 (1.5%)	10 (14.9%)
Touched intimately against your will	1 (0.8%)	----	----	----
Military-related events	----	98 (76.0%)	----	39 (58.2%)

Table 3. Characteristics and Comparisons between Bedouin Husbands and Sons Serving in the IDF

	Total sample N=196		Husbands n=129, 65.8%		Sons n=67, 34.2%		Differences ^a
	M	SD	M	SD	M	SD	
Background characteristics	M	SD	M	SD	M	SD	
Age	31.17	8.48	34.84	7.78	24.08	4.21	MD=10.76*** t=10.54 df=194
Years of schooling	11.46	2.36	11.15	2.57	12.07	1.75	MD=-0.93** t=-2.65 df=194
Months of service	75.36	79.62	96.04	89.0	35.54	30.62	MD=60.50*** t=5.40 df=194
Sum categories of traumatic events (0-5)	1.60	1.24	1.77	1.26	1.27	1.14	MD=0.50** t=2.72 df=194
Mean SPTSS	3.38	2.78	3.44	2.82	3.26	2.73	MD=1.80 t=0.43 df=194
Mean HSCL-25	1.66	0.63	1.68	0.65	1.64	0.60	MD=0.04 t=0.40 df=191
	n	(%)	n	(%)	n	(%)	
Discharged	119	(60.7%)	90	(69.8%)	29	(43.3%)	OR=3.02*** 95% CI: 1.64-5.58
Unemployed	46	(23.5%)	34	(26.4%)	12	(17.2%)	OR=1.64 95% CI: 0.78-3.43
Position in service							
Trackers	87	(44.4%)	64	(49.6%)	23	(34.3%)	
Infantry/Bedouin battalion	30	(15.3%)	16	(12.4%)	14	(20.9%)	χ ² =6.06 df=3
Border/military police	26	(13.3%)	14	(10.9%)	12	(17.9%)	
Non-combat	53	(27.0%)	35	(27.1%)	18	(26.9%)	
DSM-IV diagnoses							
PTSD ^b	32	(16.3%)	26	(20.0%)	6	(9.0%)	
Other ^c	31	(15.8%)	19	(14.7%)	12	(17.9%)	χ ² =4.09 df=2
None	133	(67.9%)	84	(65.1%)	49	(73.1%)	

Note. IDF=Israel Defense Forces; SPTSS = Screen for Post-traumatic Stress Symptoms; HSCL-25 = Hopkins Symptom Checklist-25. DSM-IV=Diagnostic and Statistical Manual, 4th ed.; PTSD = Post-traumatic Stress Disorder.

a Mean Difference (MD) from t-tests; Pearson χ², Odds Ratio (OR) with 95% Confidence Interval (CI) from unadjusted logistic regressions.

b including co-morbid with major depression and/or alcohol abuse

c including major depression, alcohol abuse with or without depression, anxiety disorders

*p < .05 **p < .01 ***p < .001

specialty health services in the preceding six months. Furthermore, mothers reported more severe emotional distress in the two weeks preceding the interview on both the PTSD symptom scale (SPTSS) and the depression/anxiety scale (HSCL-25). Mothers were twice more likely to receive mean HSCL-25 scores above the established cutoff of 1.75 (OR= 2.63, 95% CI: 1.41, 4.89, $p < .01$), associated with “caseness.” The only variable for which no significant differences were noted was the percent reporting men’s aggressive behavior (53% of the wives, 42% of the mothers). Although mothers were likely to report more adverse events, the distribution of experiences was quite similar to that reported by the wives (Table 2).

Differences between the 129 Bedouin husbands and 67 sons paired with the wives and mothers, respectively, were also explored (Table 3). As expected, husbands were older, spent more years in service, were more likely to have had more varied traumatic experiences and to have been discharged and unemployed by the time of the study. No differences were found in the percent who

served in combat positions. Nevertheless, sons were less likely to be diagnosed with PTSD than husbands (9% vs 20%), yet, on the average, husbands and sons manifested no significant differences in their post-traumatic and depression symptom scores.

FACTORS AFFECTING MOTHERS’ WELLBEING

The impact on Bedouin mothers of co-habiting with sons exposed to military trauma and suffering from PTSD and other psychiatric disorders was explored in hierarchical regression analyses (Table 4). Mirroring the analyses conducted for the wives (28), we first controlled for mothers’ poor financial status and mothers’ and sons’ traumatic exposure in step 1, then entered the two dummy variables representing sons’ diagnostic status in step 2, and mothers-reported sons’ aggression in step 3.

The results of the hierarchical regression analyses (Table 4) indicated that, with no exceptions, sons’ diagnostic status was unrelated to mothers’ emotional and somatic distress. Rather, mothers’ poor financial status

Table 4. Summary of Hierarchical Linear Regression Analyses Predicting SPTSS and HSCL-25 Symptoms and Somatic Complaints for Bedouin Mothers

Variable	SPTSS			HSCL-25			Somatic complaints		
	B	SE B	β	B	SE B	β	B	SE B	β
Step 1:	R2=.24 Adj R2=.20***			R2=.25 Adj R2=.21***			R2=.30 Adj R2=.27***		
Poor economic status, mother	1.48	0.48	0.35**	0.27	0.12	0.26*	1.30	0.50	0.28*
Traumatic exposure, mother	0.38	0.15	0.28*	0.12	0.04	0.38***	0.67	0.16	0.46***
Traumatic exposure, son	-0.21	0.20	-0.12	-0.04	0.05	-0.10	0.07	0.21	0.04
Step 2:	R2=.24 Adj R2=.17			R2=.25 Adj R2=.19			R2=.33 Adj R2=.27		
Poor economic status, mother	1.47	0.49	0.35**	0.27	0.12	0.26*	1.28	0.50	0.28*
Traumatic exposure, mother	0.38	0.15	0.28*	0.12	0.04	0.38**	0.66	0.16	0.45***
Traumatic exposure, son	-0.21	0.21	-0.12	-0.04	0.05	-0.09	-0.01	0.22	-0.00
PTSD, son (dummy)	0.04	0.80	0.01	-0.03	0.19	-0.02	0.70	0.82	0.10
Other DSM disorders, son (dummy)	-0.04	0.59	-0.01	-0.04	0.14	-0.04	0.83	0.61	0.15
Step 3:	R2=.31 Adj R2=.24**			R2=.30 Adj R2=.23*			R2=.34 Adj R2=.27		
Poor economic status, mother	1.38	0.47	0.33**	0.25	0.12	0.24*	1.24	0.50	0.27*
Traumatic exposure, mother	0.24	0.16	0.18	0.10	0.04	0.29*	0.59	0.17	0.40***
Traumatic exposure, son	-0.27	0.20	-0.16	-0.05	0.05	-0.12	-0.04	0.12	-0.02
PTSD, son (dummy)	0.09	0.77	0.01	-0.01	0.19	-0.01	0.72	0.82	0.10
Other DSM disorders, son (dummy)	0.26	0.58	0.05	0.02	0.14	0.02	0.97	0.62	0.18
Husband’s aggression, mother	1.17	0.47	0.30*	0.24	0.12	0.05*	0.54	0.50	0.13

Note. $F(6,64) = 4.39, p < .001$ for SPTSS; $F(6,64) = 4.20, p < .001$ for HSCL-25; $F(6,64) = 5.04, p < .001$ for Somatic Complaints. SPTSS = Screen for Post-traumatic Stress Symptoms; HSCL-25=Hopkins Symptom Checklist 25; PTSD = Post-traumatic Stress Disorder; DSM = Diagnostic and Statistical Manual. * $p < .05$ ** $p < .01$ *** $p < .001$

emerged as a significant and consistent factor, positively associated with their emotional and somatic distress even when all other variables were included in the model.

Mothers' utilization of primary care services was unrelated to sons' diagnostic status but was significantly and positively related to sons' aggression ($\chi^2=5.96$, $p<0.02$).

DISCUSSION

This report provides an overview of findings from a study conducted within a Bedouin community in the Galilee, which offers the first and only systematic documentation of trauma exposure and its impact among Bedouin IDF servicemen and their families.

The pervasiveness of trauma exposure and PTSD identified among the Bedouin men by the door-to-door outreach efforts highlights the absence of specific and focused means for early identification of trauma-related problems in this unique cultural group. The rate of PTSD in our male sample (nearly 20% of those traumatized) is higher than reported for trauma-exposed men in U.S.-based epidemiological surveys (29) or among Israeli university students, the majority of whom were also exposed to trauma (30). Indeed, our participants resemble groups at-risk, such as Palestinians in the Gaza Strip (26) and peacekeeping forces (31), more than they do community samples.

In addition to exposure to adverse ethnic-related events during service (32), it has been suggested that minority servicemen may experience higher levels of combat stressors (33), as well as added difficulties in the readjustment period following discharge (34). The loss of status and employment that often follows military discharge is a well-known problem for Bedouin ex-soldiers (12), and is exacerbated by the fragile balance of ethnic relations in Israel. One of the participants in the study, a former high ranking soldier in one of the elite combat units, articulated this tension: "They called me 'bro' when I was in uniform. In civilian clothes, I am just another Arab."

The vicarious impact on the Bedouin family was captured in this study by interviews with the women who live in the same households with our male participants. The plight of the wives is evident; higher rates of post-traumatic and depressive symptoms, somatic problems and increased utilization of primary care services convey quite clearly the burden of living with men whose emotional distress was severe enough to meet the criteria for PTSD or other diagnoses. The central role of husbands' aggression echoes findings reported by several Western samples.

However, a closer examination, preferably by qualitative methods, should be dedicated to the finding that aggression fully mediated the effect of PTSD on wives.

Clinical experience and the multiple interviews conducted in this community suggest that the marital bond in these traditional settings is one of the first casualties of the post-traumatic landslide. With societal codes that oppose processing and expression of emotions, the dangerous consequences of stigma, and lack of communal knowledge regarding the after-effects of trauma, wives are faced with the disintegration of the family lifestyle, yet have no coping strategies or support (28).

For many of our Bedouin patients who suffer from PTSD, the wife becomes the mirror that reflects the fallen, injured hero. Men, especially those who were fighters, report the debilitating effects of constant fear, chronic lack of sleep, inability to tolerate the children's loud voices or the daily gatherings of family and friends. The role reversal generates anger and shame; more than one patient shared with us the humiliation he feels when he awakens his wife to escort him to the bathroom at night because of fear of the dark. In addition to describing the conditions and welfare of Bedouin wives, the study attempted to explore the nature and relevance of the concept of "secondary traumatization." The literature on the impact on veterans' families identified manifestations of post-traumatic pathology rather than combat exposure itself as responsible for family problems (35). Multiple studies have linked PTSD with increased likelihood for intimate partner violence and aggression within the family (36, 37) and with partners' psychological maladjustment (38).

Several mechanisms may explain the crossover of stress between partners: 1. the presence of common stressors affecting both partners, such as financial problems, causing the pressure cooker effect (39); 2. indirect crossover moderated by interactions in which individual's distress causes undermining behavior toward the spouse, resulting in her/his distress; 3. direct crossover that generates stress contagion by which the spouse experiences the individual's distress through empathy.

In our sample, the explanation of the pressure cooker effect, caused by common stressors, could not be completely ruled out, especially because of the high rate of unemployment and drop in financial status associated with military discharge in this community. However, poor financial status was not shown to be related to wives' distress. Direct empathic crossover is also not a likely explanation for the wives' distress as Bedouin

wives are commonly unfamiliar with the men's military activities, especially not traumatic experiences. It is much more probable that their secondary stress is related to the demands of living with a symptomatic husband, as described among spouses of Holocaust survivors who were children during World War II (40).

Indeed, the explanation most fitting the Bedouin couples in our sample appears to be indirect crossover, whereby husband's ordeal exacerbates spouse's psychological and physical distress due to his undermining aggressive behavior. The concept of Burden of Care, which has only minimally been studied among families coping with anxiety disorders (41), has been described in terms of its emotional, psychological, and physical impact, the experience of shame, embarrassment, feelings of guilt and self-blame (42). Wives of veterans with PTSD are faced with significant chronic stressors merely by living with a trauma-disordered person; they must cope with role reversal, lack of partnership, full responsibility for the family, and significant loss of their former life-style (43). For the Bedouin wife, there is no access to information about trauma or PTSD to help her name the problem and little support from a community concerned with stigma and oftentimes misunderstood by a culturally-insensitive mental health system (44).

The role of shame in the adaptation of the Bedouins to the impact and consequences of post-traumatic stress is of great importance, although no systematic study of it is available as of yet. In our clinical experience, shame is a critical dimension of post-traumatic pathology and the experience most consistently accountable for the enhancement of the already debilitating effects of PTSD (45) increasing the vicious circles of avoidance, subsequent isolation, loss of social support and self-loathing, shame can often be found at the root of chronic, treatment-resistant PTSD. Both shame and fear are biologically stressful experiences, yet shame is the organizing social force in cultures that are shame/honor-based (46). Indeed, in our men's sample, the loss of personal resources (e.g., self-esteem, self-mastery) was found to be the best predictor of psychological distress (47). These findings underline the paradoxically significant value of personal resources within collectivist communities in coping with trauma and maintaining resilience, and support the view that the role of shame in traumatic disorders, especially in these settings, is a vital area for further study (48).

The observed differences between wives and mothers reflect genuine generational differences (8), as well as differences in culturally defined familial roles (49).

Although clearly not affected directly by sons' distress as wives are by their husbands', mothers' overall poor health should be an issue of concern. Although the role of sons' aggressive behavior was limited in this study to mothers' level of depression, it may be just the tip of the iceberg for a much more complex problem. Anecdotal data suggest that Bedouin mothers are oftentimes not supportive of sons' military enrollment, either due to being more religious or to a lesser involvement with events outside of the community. However, the implications of this potential conflict, once a son returns home with a psychiatric disability, are yet to be uncovered.

LIMITATIONS AND CONCLUSIONS

The study's primary limitation involves its sampling method. All attempts to get a comprehensive listing of all IDF members in the village were unsuccessful. Although exceeding our expectations, the high response rate in the men's survey cannot compensate for the possibility that households not included or women not interviewed were different in some meaningful way from our participants.

Another limitation is the study's cross-sectional design and the absence of data on onset of symptoms for both men and women. Our impression was that for most men, PTSD had a delayed onset, following discharge, thus disconnecting even further the post-traumatic manifestations from the traumatic events. Indeed, during the interviews with the men, the most prevalent explanatory model for their symptoms appeared to center around retribution and reprisal, drawing on the ancient justice of "eye for an eye, tooth for a tooth." As explained by one participant: "Even though I had no choice and my life depended on it, taking the life of another human being is an act I have to pay for, and if not I, then my children, or my children's children."

Although the Bedouins in Israel deal with a unique set of circumstances, the issues they face are relevant for other ethnic and cultural minority groups in military service. Participation by indigenous people in the military has been the focus of an in-depth and remarkable investigation undertaken by the Canadian Forces that explore the relationship between Aboriginal peoples and Western militaries from a cross-cultural perspective (50, 51). Valuable lessons can be learned from North American's Indians or First Nation communities, the Aborigines of Australia, the Maori of New Zealand and other such culturally distinct groups that supported the war efforts of nation-states

responsible historically for their displacement and exploitation. Whereas assimilation of these aboriginal populations, entailing their conversion to Christianity and the elimination of their distinctive cultural patterns, was an objective of colonial institutions (52), the socio-cultural and religious segregation of the Bedouin communities from the Jewish majority is endorsed by all. As a result, the conservative, non-Western lifestyle typical of Bedouin and other Arab communities is maintained in parallel to the dominant Western majority culture, with only restricted, mostly commerce-based interactions.

Consequently, it is necessary that early identification of trauma-related problems and intervention efforts with this community will be formed with the understanding that integration into the majority culture is unlikely to occur in the near future. Indeed, one of the most alarming findings in this study is that those most in need of trauma-informed care refrain from utilizing mental health services. Moreover, given the profound cultural barriers to care, a three-fold proactive approach should be undertaken: 1. Trauma-related problems should be addressed during the military service and issues related to re-entry into civilian life should be discussed, 2. Community education, specifically for women, about trauma and PTSD should be introduced in order to reduce the impact of shame and the fear of stigma, 3. Primary care physicians, a resource easily utilized in traditional communities (53), should be educated in order to identify PTSD, domestic problems, depression and alcohol abuse among their minority patients.

Finally, the disruption in family life caused by the returning veteran's PTSD has been well documented (4) and the long-term risk for the children has also been suggested (54). Trauma-related needs should therefore be addressed effectively, comprehensively, and early enough in order to prevent the ever growing circles of loss and cross-generational transmission. In native societies, these issues are commonly further amplified by the myriad of adversities already at their doorstep.

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