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## Daily Stressors, War Experiences, and Mental Health in Afghanistan

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**Abstract** Working in Afghanistan's capital city of Kabul, the authors assessed the relative contribution of daily stressors and war-related experiences of violence and loss to levels of depression, PTSD, impaired functioning, and a culturally specific measure of general psychological distress. For women, daily stressors were a better predictor than war experiences of all mental health outcomes except for PTSD; for men, daily stressors were a better predictor of depression and functional impairment, while war experiences and daily stressors were similarly predictive of general distress. For men, daily stressors moderated the relationship between war experiences and PTSD, which was significant only under conditions of low daily stress. The study's implications for research and intervention in conflict and post-conflict settings are considered.

**Key words** Afghanistan • functioning • mental health • PTSD • stress

Research on the mental health of war-affected populations has focused primarily on the assessment of Post-traumatic Stress Disorder (PTSD) and its association with war-related experiences of violence and loss. Numerous studies, using diverse methodologies and focusing on both clinical and community samples, have documented a positive, though highly variable, relationship between levels of PTSD symptomatology, or alternatively the likelihood of receiving a diagnosis of PTSD ('caseness'), and the degree of people's exposure to the violence and destruction of armed conflict (Hubbard, Realmoto, Northwood, & Masten, 1995; Miller et al., 2002, Mollica et al., 1998). To a lesser extent, there has also been a focus on examining the prevalence of other types of psychopathology, primarily depression and anxiety, again with the aim of assessing the strength of their relationship to prior experiences of violence and loss associated with violent political conflict.

This empirical focus on the psychological sequelae of exposure to political violence has shed important light on the mental health effects of living through the terror, destruction, and loss that such violence invariably generates. Although there is a growing debate regarding the reliance on western psychiatric constructs to describe symptoms and syndromes of distress in populations that are overwhelmingly non-western (Bracken, Giller, & Summerfield, 1995; Breslau, 2004; Jenkins, 1996; Miller, Kulkarni, & Kushner, 2006), the available data do clearly suggest that exposure to political violence has a strongly adverse impact on people's mental health.

Beyond these direct effects on mental health (e.g., through the destruction of people's homes, the disappearance or death of family members, sexual assault by armed combatants, arbitrary detention, torture, and a chronic fear of being injured or killed), situations of prolonged violence may exert *indirect* effects on mental health by destroying a nation's infrastructure and economy, thereby increasing poverty and its associated psychosocial stressors (de Berry et al., 2003; Dawes & Donald, 1994) by causing the mass displacement of civilian populations, resulting in highly stressful experiences (Marsella, Bornemann, Ekblad, & Orley, 1994; Miller & Rasco, 2004); by weakening or destroying social networks, thereby reducing the availability of social support and increasing social isolation (Bennett & Detzner, 1997; Buitrago Cuéllar, 2004); and by weakening the social bonds and norms that underlie civil society and that create a sense of normality, predictability, and security (Buitrago Cuéllar, 2004; Martín Baró, 1989; Scheper-Hughes & Bourgois, 2004). These conditions may generate significant distress while simultaneously undermining the strategies and resources available to people to cope with that distress. To date, however, researchers working in conflict or post-conflict settings have rarely considered the potential influence of such indirect effects of

prolonged violent conflict on mental health, focusing instead on the direct effects of exposure to war-related violent events.

Preliminary support for the importance of expanding our empirical focus to include the psychological impact of stressful social conditions (referred to in this paper as 'daily stressors') in conflict and post-conflict settings comes from research on the mental health of refugees (people living outside of their country of origin as a result of actual or anticipated violence). Given the high level of exposure to violent political conflict in refugee populations, and the emerging popularity of traumatology as an interdisciplinary field of study, it is not surprising that much of the earlier research on refugee mental health was focused primarily on assessing the prevalence of PTSD and its relation to war-related violence. Although this approach was informative, it soon became apparent that a significant amount of the variance in levels of distress remained unaccounted for by models in which war-related violence was the sole or primary predictor. Recently, however, a number of researchers have broadened their view to consider the etiological role of daily stressors associated with the experience of displacement, as they impact refugees' mental health. The findings of these studies consistently suggest that displacement-related stressors account for a great deal of the unexplained variance in levels of psychiatric symptomatology among refugees. Specifically, the data suggest that daily stressors such as social isolation, a lack of social support, poverty, unemployment, and a loss of meaningful activity are strongly related to mental health status, and in particular to levels of depression and anxiety (Gorst-Unsworth & Goldenberg, 1998; Lavik, Hauff, Skrondal, & Solberg, 1996; Miller et al., 2002; Pernice & Brook, 1996; Silove, Sinnerbrink, Field, & Manicavasagar, 1997). There is also some evidence that daily stressors may *moderate* the relationship of war-related violence to mental health status among refugees, with higher levels of PTSD associated with greater exposure to daily stressors such as social isolation and a lack of familial contact and support (Kinzie, Sack, Angell, Manson, & Rath, 1986; Miller et al., 2002). Writing about the moderating role that stressful social conditions may play in shaping people's reactions to traumatic life events, Kubiak (2005, p. 451) has cautioned that an overly narrow focus on the direct effects of traumatic events 'neglects more continuous and enduring forms of stress that are most likely to deplete coping resources and possibly contribute to the manifestation of PTSD in individuals with trauma exposure.'

In contrast to research with refugees, few studies have examined the nature and mental health correlates of ongoing stressors affecting people still living in conflict and post-conflict settings. Consequently, we know comparatively little about the day-to-day stressors that people face in zones of ongoing or recently terminated conflict, the influence of such

stressors on their mental health and psychosocial functioning, or the extent to which exposure to daily stressors may diminish people's capacity to cope with the impact of previously experienced war-related violence. This empirical gap has important implications for the development of effective mental health policy and interventions. In focusing narrowly on healing the effects of post-traumatic stress reactions associated with previously experienced violent events, we risk overlooking salient stressors in people's daily lives that may (1) exert a direct influence on their mental health and psychosocial functioning; (2) moderate the traumatic impact of war-related violence by depleting their coping resources (i.e., leave people more vulnerable to developing enduring post-traumatic stress responses); and (3) be amenable to change through targeted interventions. For example, to the extent that a lack of social support, inadequate housing, or domestic violence are contributing significantly to psychological distress and functional impairment, intervention efforts are more likely to be perceived as relevant, and to have a more substantial impact, if they target such ongoing sources of stress, rather than focusing solely or primarily on the resolution of war-related trauma. In a related vein, to the extent that stressful social conditions are depleting people's capacity to cope effectively with their exposure to experiences of political violence, we may achieve more by working to alter those social conditions—thereby restoring people's natural coping resources and abilities—than by directly trying to ameliorate symptoms of traumatic stress.

The present study was designed to address the dearth of knowledge regarding the nature and psychological correlates of ongoing stressors in conflict and post-conflict settings. Working in Afghanistan's capital city of Kabul four years after the fall of the Taliban and in the wake of more than two decades of war and violent repression, we developed a context-specific measure of daily stressors, the Afghan Daily Stressors Scale (ADSS). Together with a previously developed measure of war-related experiences of violence and loss adapted for use in Afghanistan, as well as several measures of mental health, we assessed the prevalence and salience of a diverse set of daily stressors and their relation to mental health and psychosocial functioning among 160 women and 160 men in the city of Kabul.

Specific hypotheses we tested included the following:

- (1) Daily stressors will account for more variance than war experiences in self-reported levels of depression, impaired psychosocial functioning, and general distress as measured by the Afghan Symptom Checklist, a culturally specific measure of psychiatric symptomatology;
- (2) War experiences will account for more variance than daily stressors in levels of self-reported PTSD symptomatology; however, daily stressors will moderate the impact of war experiences on PTSD symptom levels.

*THE STRESSFUL NATURE OF EVERYDAY LIFE IN KABUL*

As of this writing, seven years have passed since the Taliban were forced to flee Kabul in November of 2001. On most social indicators, Afghanistan continues to rank near the bottom of the world's nations: the average life span is still roughly 42 years, infant and maternal mortality rates are among the highest in the world, literacy rates are among the lowest, and the drug trade continues to account for at least 60% of the country's gross domestic product (Rubin, Hamidzada, & Stoddard, 2005; UNDP, 2005). Much of the country remains under the control of warlords, and a state of low-intensity warfare between NATO and Taliban forces continues (e.g., recurrent skirmishes, suicide attacks on NATO forces, intermittent air and land attacks on insurgent forces). Daily life in Kabul is difficult: poverty is endemic, unemployment is rampant, and wages are low. Physical health care is scarce and generally of poor quality, while mental health services are essentially non-existent outside of the services of an impoverished psychiatric hospital and few non-governmental organizations (NGOs). Social networks have been disrupted through the death or displacement of family members and friends, depriving people of traditional sources of social support. Violence against women is generally regarded as pervasive and socially tolerated. Government officials at all levels are widely perceived to be corrupt, violent crime is rampant throughout the city, and acts of terrorism, including suicide bombings and kidnappings, occur frequently throughout Kabul. Major streets are constantly congested with traffic, the result of roadblocks set up to protect government officials and other influential figures. The air is heavily polluted and difficult to breathe, with the surrounding mountains locking in the smog generated by the growing number of vehicles and other sources of pollution.

In sum, life in Kabul entails daily exposure to numerous stressors. Many of these are related to the breakdown of the social order and the destruction of the economy and infrastructure over the course of more than 20 years of warfare and political repression. The present study was an attempt to better understand the mental health correlates of these daily stressors, and to examine the extent to which these difficult social conditions may increase people's vulnerability to the adverse psychological effects of the extreme violence they have endured.

**METHODS***PARTICIPANTS*

Participants in this study were 160 women and 160 men, age 21 and older, in eight of Kabul's 16 districts. Men were, on average, somewhat older and better educated than women, with a mean age of 37.4 versus 34.3 years,

and 7.3 versus 4.9 years of schooling, respectively. The majority of participants of both sexes were married; however, 25% of the women self-identified as widows, while none of the men identified as widowers; 85% had experienced the destruction of their homes at least once during the years of warfare; 49% had one or more family members who had been killed; 53% had at least one family member who had been injured during the war; and 25% had been injured themselves as a result of the violence.

Convenience sampling was utilized in the present study. Districts were selected to ensure variance in the intensity of war exposure, though such variance was limited due to the pervasive nature of the civil war. Women were interviewed in their homes by female surveyors, who began on a randomly selected street and continued door to door, moving from one street to the next adjacent or cross street until the target number of female participants had been surveyed. Men, who are rarely at home during the day, were interviewed by male surveyors in shops, mosques, and on the street. For their participation, women received a box of washing soap, while men received a box of tea (these items were selected by the team of surveyors). A maximum of two women in the same household could be interviewed, but had to be of different generations to increase sample diversity. Interviewing the women turned out to be considerably easier, because of the privacy afforded by conducting the survey in their home. Although participation rates were approximately equal (100% for women, 95% for men), the male surveyors had a more difficult time finding private spaces in which to conduct the survey. This was generally achieved by asking male participants to find a spot in the mosque, shop, or street where the survey could be administered with some privacy. Clearly, this was less than ideal in a cultural context where revealing emotional distress among men is discouraged. We return to this point below, when considering the possible under-reporting of distress by men. All interviewers were Afghans whose educational backgrounds ranged from high school to university.

## *MEASURES*

To ensure consistency across the six measures, participants were asked to focus on the previous month when responding to the items on each questionnaire.

### *Independent Variables*

*Daily Stressors.* The Afghan Daily Stressors Scale (ADSS) was developed for the present study using a multi-step process. First, an initial pool of 20 commonly experienced stressors was selected based on the authors' experience living and working in Kabul and on narrative data gathered during a previous study regarding psychological distress among residents of the

city (Miller et al., 2006). This set of items was then reviewed by a panel of Afghans with extensive experience in community research and intervention, who modified or deleted several items and added others, yielding a total of 22 items. The measure was then translated into Dari and independently back-translated into English; any discrepancies were then corrected. The measure was then reviewed by the full research team, which added four additional items, and modified the language to ensure that all items would be easily understood by community members with limited or no formal education. The 26-item ADSS asks respondents to indicate how stressful they have found each of the items during the past month: (1) not at all stressful, (2) somewhat stressful, or (3) very stressful. Responses on each item are summed to yield a total score, ranging from 26 to 78. The measure assesses a diverse range of daily stressors, from financial hardships, health concerns, and social isolation, to family conflict, illiteracy, inadequate housing, and environmental concerns such as air pollution and roadblocks. The measure was pilot tested on a sample of 80 adults (40 women and 40 men) in two districts of Kabul. All items were readily understood. The internal consistency of the ADSS varied by gender, with Cronbach's  $\alpha = .78$  for women, and .58 for men. Several items with comparatively low item-total correlations (e.g., separation from family members) were nonetheless rated as quite stressful, and were therefore retained because of their local salience.

*War Experiences.* Exposure to war-related experiences of violence and loss was assessed using the Afghan War Experiences Scale (AWES) (Miller, Omidian et al., 2006). The AWES asks respondents to indicate whether they have experienced each of 17 war-related events (1) never, (2) once, or (3) more than once. Scores for all items are summed, yielding a range of 17 to 51. In a recent survey of mental health in Kabul, the AWES demonstrated excellent internal consistency across gender (Cronbach's  $\alpha = .94$  for women, .91 for men), and was found to correlate strongly and positively ( $r = .70$ ) with a culturally specific measure of psychological distress, the Afghan Symptom Checklist (Miller, Omidian et al., 2006).

### *Dependent Variables*

*General Psychological Distress.* The Afghan Symptom Checklist (ASCL) (Miller, Omidian et al., 2006) is a culturally specific measure of psychological distress that includes several indigenous items (e.g., *jigar khun*; literally 'bloody liver,' referring to a state of dysphoria; and *asabi*, a state of nervous irritability), as well as several items familiar to western psychiatry (e.g., crying, insomnia, social withdrawal, rumination). In a recent survey of 320 adults in Kabul, the ASCL demonstrated excellent internal consistency for women and men (Cronbach's  $\alpha$  coefficient = .94 for women, .89 for men), and good construct validity, correlating strongly



( $r = .70$ ) with level of exposure to war-related stressors (Miller, Omidian et al., 2006).

*Depression.* Depression was measured using the Hopkins Symptom Checklist (HSCL) (Mollica, Wyshak, Khoun, & Lavelle, 1987). The HSCL is a 25-item measure that includes a 15-item depression subscale, with answer choices ranging from 1 ('not at all') to 4 ('extremely'). The HSCL has been used widely in studies of refugees and other war-affected populations (Mollica et al., 1987; Thapa, van Ommeren, Sharma, de Jong, & Hauff, 2003), including two recent studies of Afghans (Lopez-Cardozo et al., 2004; Scholte et al., 2004), and has demonstrated good reliability and construct validity. In the present study, Cronbach's alpha for the depression subscale was .73 for women and .60 for men.

*Post-traumatic Stress Disorder.* PTSD symptomatology was assessed using the Impact of Event Scale-Revised (IES-R) (Weiss & Marmar, 1997). The IES-R is a 22-item measure that asks participants to rate, on a scale ranging from 0 ('not at all') to 4 ('extremely'), how distressing each trauma symptom has been for them in the past seven days (past month for the present study). The IES-R has demonstrated a high level of internal consistency, good test-retest reliability, and good predictive validity (Briere, 1997; Weiss & Marmar, 1997). In a recent study of Afghan refugees in Austria (Renner, Salem, & Ottomeyer, 2008), the IES-R yielded a Cronbach's alpha = .89 and a convergent validity coefficient (with clinician diagnosis) of .81. The internal consistency of the IES-R in the present study was .82 for women and .65 for men.

*Psychosocial Functioning.* Psychosocial functioning was assessed using the World Health Organization Disability Assessment Scale-II (WHODAS-II) (World Health Organization, 2000). The WHODAS-II 12 Item Version taps various domains of daily functioning, and has been used extensively in cross-cultural mental health research. Answer choices rate degree of difficulty of functioning on five point scales, from 1 ('none') to 5 ('extreme'), yielding a range of possible scores of 12–60, with higher scores reflecting greater functional impairment. Due to a logistical complication, the WHODAS-II was not administered to the first 80 participants; therefore, the regression models assessing predictors of functional impairment include data from only those 244 participants (122 women and 122 men) to whom the WHODAS-II was administered. The internal consistency (Cronbach's alpha) of the WHODAS-II in this study was .80 for women and .65 for men.

## PROCEDURE

Because the majority of adults in Kabul have limited or no literacy skills, the battery of questionnaires was read aloud to all participants. Answer choices were presented graphically, using large laminated cards that had drinking glasses filled to different levels corresponding with the particular answer choices on each measure (e.g., the card for the ADSS included three glasses: one empty ('not at all'), one half full ('somewhat'), and one completely full ('very much'). The survey was conducted in Dari (a dialect of Farsi), the *de facto* common language of Kabul.

## DATA ANALYSIS

Because of the different sampling strategies used with women (door to door) and men (various locations outside of the home), all analyses were conducted separately for each gender. For the measure of daily stressors (ADSS), means and standard deviations were calculated for all 26 items. To assess the relative contribution of daily stressors and war experiences to our four mental health outcome variables, we conducted a series of four hierarchical multiple regressions. Age was entered in the first block. The two main predictors, war experiences (AWES) and daily stressors (ADSS) were entered next, in Block 2. We then entered two-way interaction terms in Block 3 in order to assess possible interactions between age and war experiences, and age and daily stressors (Step 3). Because we found no significant interactions involving age, interaction terms with age are not included in the analyses presented. Following the recommendation of Aiken and West (1991), all predictor scores were centered (i.e., the mean of each scale was subtracted from each individual's score) in order to reduce multicollinearity that may occur when interactions terms are included in multiple regression analysis. All statistical analyses were conducted using SPSS for Windows, Version 14.

## RESULTS

Descriptive statistics for all measures, separated by gender, can be seen in Table 1. Pearson correlation coefficients were obtained for all pairs of variables and are displayed in Table 2, again presented separately by gender. Mental health variables were highly correlated for both men and women, reflecting a certain degree of shared symptomatology among the categories of distress measured by each scale, as well as the comorbidity that has frequently been found among depression, anxiety, and PTSD (McFarlane, 2004). The Afghan Symptom Checklist, which primarily taps dimensions of dysphoria, nervousness, and somatic distress, correlated

**TABLE 1**  
Descriptive Statistics by Gender

	Women (N = 160)		Men (N = 160)		t
	Mean	SD	Mean	SD	
Daily Stressors (ADSS)	53.63	6.86	50.34	5.46	4.73***
War Experiences (AWES)	32.31	4.35	32.08	4.09	0.53
General Psychological Distress (ASCL)	63.65	11.53	52.35	10.35	9.23***
Anxiety (HSCL-A)	27.66	5.27	18.36	3.77	18.14***
Depression (HSCL-D)	36.76	6.27	29.81	5.71	10.36***
PTSD (IES-R)	59.03	10.77	34.94	9.21	21.50***
Psychosocial Functioning (WHODAS-II)	35.38	7.84	29.29	6.62	6.58***

\*\*\*  $p < .001$

ADSS = Afghan Daily Stressors Scale

AWES = Afghan War Experiences Scale

ASCL = Afghan Symptom Checklist

HSCL-A = Hopkins Symptom Checklist-Anxiety Subscale

HSCL-D = Hopkins Symptom Checklist-Depression Subscale

IES-R = Impact of Event Scale-Revised

WHODAS-II World Health Organization Disability Scale-II

**TABLE 2**  
Pearson correlations between all pairs of variables

	ADSS	AWES	ASCL	HSCL-D	IES-R	WHODAS-II
ADSS		.54**	.58**	.59**	.40**	.31**
AWES	.20*		.34**	.34**	.39**	.21*
ASCL	.48**	.47**		.65**	.51**	.51**
HSCL-D	.49**	.38**	.74**		.46**	.48**
IES-R	.30**	.30**	.54**	.56**		.43**
WHODAS-II	.50**	.25*	.48**	.58**	.46**	

\*  $p < .01$ , \*\*  $p < .001$

Note: Above the diagonal are coefficients for women, below, for men

ADSS = Afghan Daily Stressors Scale

AWES = Afghan War Experiences Scale

ASCL = Afghan Symptom Checklist

HSCL-D = Hopkins Symptom Checklist-Depression Subscale

IES-R = Impact of Event Scale-Revised

WHODAS-II World Health Organization Disability Scale-II

highly with each of the etic or transcultural measures. There was also a moderately strong correlation between war experiences and daily stressors.

### DAILY STRESSORS

The 26 items of the ADSS can be seen in Table 3, along with mean scores and standard deviations for each item. In Table 4, we present, separately

**TABLE 3**  
Descriptive statistics: Afghan Daily Stressors Scale (ADDS) by gender

Item	Women		Men		t
	Mean	(SD)	Mean	(SD)	
1. Not having enough money to pay for things my family needs	2.57	(.52)	2.52	(.59)	0.80
2. Not feeling safe in my home	1.34	(.55)	1.50	(.63)	-2.45*
3. Not feeling healthy	2.39	(.61)	2.17	(.76)	2.83 <sup>a</sup>
4. Not being able to find work	2.36	(.71)	2.31	(.81)	0.59
5. Not feeling safe walking around outside of my home	1.34	(.51)	1.21	(.43)	2.25*
6. Not feeling happy with my family	1.61	(.68)	1.61	(.71)	0.00
7. Not being able to afford medicines I need	2.46	(.63)	2.24	(.71)	2.98***
8. Problems with my teeth	2.26	(.77)	1.81	(.87)	4.97***
9. A family member being sick	2.34	(.66)	2.36	(.71)	-1.62
10. Feeling lonely	1.94	(.65)	1.74	(.80)	2.46*
11. Feeling like people don't give me enough support	1.53	(.61)	1.61	(.70)	-1.10
12. Being beaten by a family member	1.18	(.46)	1.09	(.34)	2.06*
13. Financial problems	2.55	(.57)	2.58	(.58)	-0.49
14. Overcrowding in my house	1.71	(.69)	1.94	(.77)	-2.84**
15. The physical condition of my house	1.86	(.76)	2.00	(.68)	-1.81
16. Conflict in my home	1.57	(.61)	1.61	(.71)	-0.59
17. Missing relatives who live far away	2.30	(.69)	2.00	(.83)	3.58***
18. The security situation in Afghanistan	2.53	(.62)	1.81	(.64)	10.11***
19. Not having anyone I can talk to about what is in my heart	2.12	(.64)	1.54	(.77)	7.35***
20. Air pollution	2.74	(.52)	2.70	(.68)	0.61
21. Roadblocks	2.81	(.54)	2.54	(.73)	3.85***
22. Not having children of my own	1.44	(.74)	1.42	(.68)	0.24
23. Having too many children in the house	1.95	(.92)	1.71	(.07)	2.40*
24. Being unable to provide for my children's needs	1.95	(.74)	1.80	(.79)	1.89
25. Being unable to read or write	2.38	(.82)	2.20	(.88)	1.84
26. Not owning my own home	2.33	(.88)	2.26	(.83)	0.78

\*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ ; <sup>a</sup>  $p = .05$

**TABLE 4**  
Top 12 daily stressors for women and men

<i>Women</i>			
<i>Item</i>		<i>Mean</i>	<i>(SD)</i>
1. Roadblocks		2.81	(.54)
2. Air pollution		2.74	(.52)
3. Not having enough money to pay for things my family needs		2.57	(.52)
4. Financial problems		2.55	(.57)
5. The security situation in Afghanistan		2.53	(.62)
6. Not being able to afford medicines I need		2.46	(.63)
7. Not feeling healthy		2.39	(.61)
8. Being unable to read or write		2.38	(.82)
9. Not being able to find work		2.36	(.71)
10. A family member being sick		2.34	(.66)
11. Not owning my own home		2.33	(.69)
12. Missing relatives who live far away		2.30	(.69)
<i>Men</i>			
<i>Item</i>		<i>Mean</i>	<i>(SD)</i>
1. Air pollution		2.70	(.68)
2. Financial problems		2.58	(.58)
3. Roadblocks		2.54	(.73)
4. Not having enough money to pay for things my family needs		2.52	(.59)
5. A family member being sick		2.36	(.71)
6. Not being able to find work		2.31	(.81)
7. Not owning my own home		2.26	(.83)
8. Not being able to afford medicines I need		2.24	(.71)
9. Being unable to read or write		2.20	(.88)
10. The physical condition of my house		2.00	(.68)
11. Missing relatives who are far away		2.00	(.83)
12. Overcrowding in my house		1.94	(.77)

for women and men, the 12 stressors with the highest mean scores. Although the specific means, standard deviations, and order within the two lists vary, there is considerable overlap in the daily stressors that women and men experience as most stressful, with 10 of the 12 same stressors appearing in both lists. The most salient stressors concern roadblocks (which cause extreme delays in public transportation throughout the city), air pollution, poverty, unemployment, health problems and a lack of access to medication, illiteracy, separation from loved ones, and a lack of adequate housing.

Although the data do suggest that women and men experience a similar set of daily stressors, they also indicate that women generally experience those stressors more intensely. While our sampling strategy precludes

statistical comparison, women reported a higher mean level of stress than men in numerous domains, including social isolation, feeling unsafe outside of the home, health, domestic violence, and overcrowding at home.

### THE RELATIVE CONTRIBUTION OF DAILY STRESSORS AND WAR EXPERIENCES TO MENTAL HEALTH

#### MODEL 1: PREDICTORS OF GENERAL DISTRESS (AFGHAN SYMPTOM CHECKLIST)

The results of the regression analyses are presented in Table 5, with separate results for each of the four measures of distress (i.e., each of the dependent variables). For women the full model for general distress was significant, accounting for 34% of the variance in ASCL scores ( $Adj. R^2 = .34$ ;  $F(4, 155) = 21.52$ ,  $p < .001$ ). As hypothesized, daily stressors

**TABLE 5**  
Final models of hierarchical regressions predicting distress

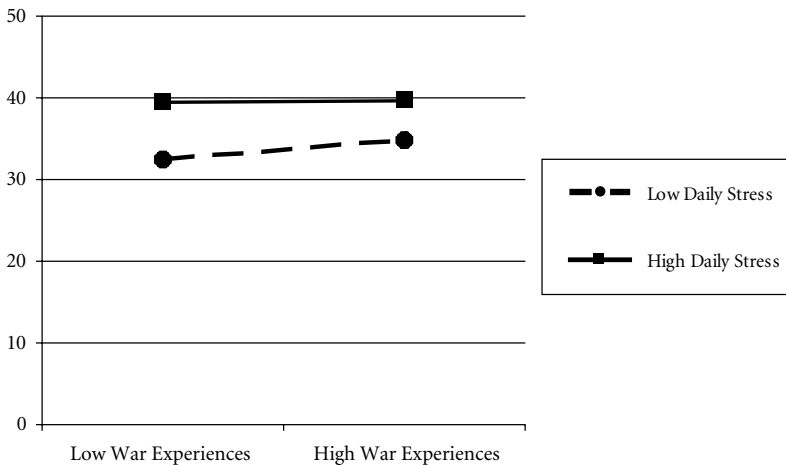
	Women			Men		
	<i>B</i>	<i>SE</i>	$\beta$	<i>B</i>	<i>SE</i>	$\beta$
<b>Model 1: ASCL (general distress)</b>						
Age	.17	.08	.15*	.02	.05	.03
War Experiences	.10	.21	.04	.90	.19	.36***
Daily Stressors	.88	.13	.52***	.76	.13	.40***
War Experiences $\times$ Daily Stressors	-.02	.03	-.06	-.03	.03	-.06
<b>Model 2: HSCL-Depression</b>						
Age	.13	.04	.21**	.01	.03	.01
War Experiences	.06	.11	.04	.36	.11	.26**
Daily Stressors	.49	.07	.53***	.45	.07	.43***
War Experiences $\times$ Daily Stressors	-.04	.01	-.17**	-.02	.02	-.07
<b>Model 3: IES-R (PTSD)</b>						
Age	.14	.08	.14	.05	.05	.09
War Experiences	.59	.21	.24**	.31	.19	.14
Daily Stressors	.38	.13	.24**	.39	.13	.23**
War Experiences $\times$ Daily Stressors	-.02	.03	-.07	-.08	.03	-.22*
<b>Model 4: WHODAS-II (functional impairment)</b>						
Age	.17	.07	.22*	.12	.04	.25**
War Experiences	.17	.18	.09	.13	.14	.08
Daily Stressors	.29	.11	.26**	.51	.11	.40***
War Experiences $\times$ Daily Stressors	-.09	.02	-.38***	-.01	.03	-.04

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

contributed significantly to general distress, as did age, with older women reporting higher levels of distress; however, level of war experiences was not a significant predictor. For men, the full model accounted for 37% of the variance in ASCL scores ( $\text{Adj. } R^2 = .37$ ;  $F(4, 155) = 24.12, p < .001$ ). In contrast to the results for the women's data, age was not a significant predictor; however, daily stressors and war experiences were both strongly predictive of general distress.

*MODEL 2: PREDICTORS OF DEPRESSION (HSCL-DEPRESSION SCALE)*

For women, the full model was significant, accounting for 39% of the variance in scores on the HSCL-Depression subscale ( $\text{Adj. } R^2 = .39$ ;  $F(4, 155) = 26.89, p < .001$ ). Older women reported higher levels of depressive symptoms. Consistent with our hypothesis, there was a significant main effect for daily stressors, but not for war experiences. The interaction between war experiences and daily stressors was also statistically significant. In order to investigate this interaction further, we split daily stressors scores above and below the median value (i.e., a median split of the moderator variable) and conducted separate hierarchical regressions at each level. This allowed us to examine the strength of the effect of war exposure on depression, controlling for age, at high and low levels of daily stress. Although the interaction in Model 2 was statistically significant, when we split the sample by women with high and low stress, the partial correlation (controlling for age) between war experiences and depression was not statistically significant at either level of daily stress (see Figure 1).



**Figure 1** HSCL-Depression scores for men ( $n = 160$ ) at low and high daily stress levels as a function of low and high experiences of war exposure.

For men, the full model was also significant, accounting for 31% of the variance in depression scores (Adj.  $R^2 = .31$ ;  $F(4, 155) = 18.57$ ,  $p < .001$ ). As with the women's model and consistent with our hypothesis, daily stressors were a substantially better predictor of depression than war experiences, although both variables were related to level of depressive symptoms. The interaction between daily stressors and war experiences was not statistically significant for men.

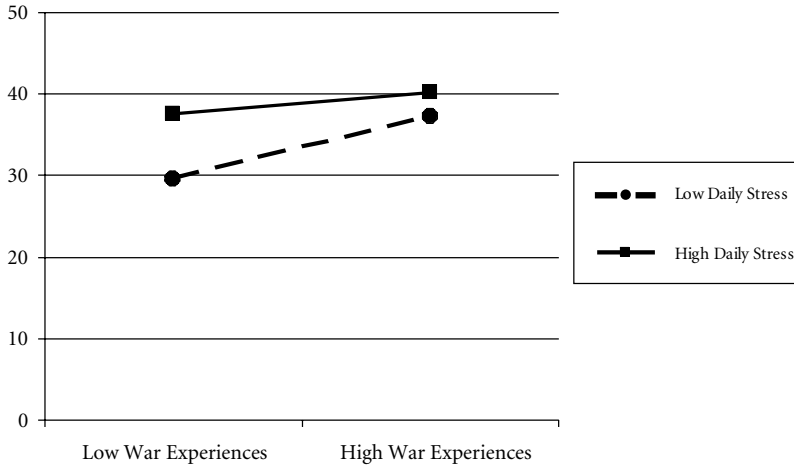
#### MODEL 3: PREDICTORS OF PTSD (IES-R)

For women, the full model was again significant, accounting for 20% of the variance in scores on the IES-R [Adj.  $R^2 = .20$ ;  $F(4, 155) = 11.2$ ,  $p < .001$ ). Somewhat unexpectedly, war experiences and daily stressors contributed equally to levels of PTSD symptoms. For men, the full model was also significant, accounting for 17% of the variance in scores on the IES-R (Adj.  $R^2 = .17$ ;  $F(4, 155) = 9.23$ ,  $p < .001$ ). Contrary to our hypothesis, war experiences did not exert a main effect on PTSD symptoms among men. Daily stressors, in contrast, were significantly related to PTSD symptom level. Importantly, the interaction term for daily stressors and war experiences was significant in the men's model. In order to investigate the interaction further, we ran regression equations at high and low levels of daily stress predicting PTSD symptoms from war experiences (accounting for age in the first block). Under conditions of *high* daily stress, the effect of war experiences was not statistically significant ( $\beta = .04$ ,  $p = .81$ ). However, under conditions of *low* daily stress the effect of war exposure on PTSD was strong ( $\beta = .34$ ,  $p < .001$ ). The meaning of this finding, depicted graphically in Figure 2, is considered below.

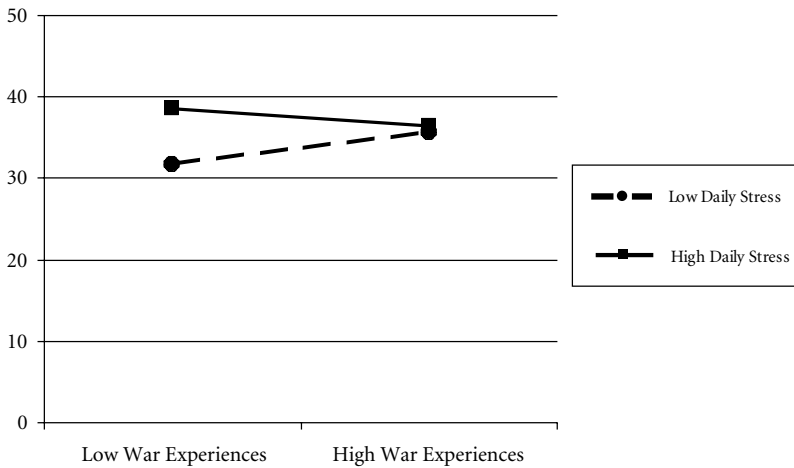
#### MODEL 4: PREDICTORS OF FUNCTIONAL IMPAIRMENT (WHODAS-II)

For women the full model was again significant, accounting for 25% of the variance in scores on the WHODAS-II [Adj.  $R^2 = .25$ ;  $F(4, 115) = 11.11$ ,  $p < .001$ ). Not unexpectedly, older age was associated with greater functional impairment. As hypothesized, daily stressors were strongly predictive of impaired functioning; in contrast, war experiences did not exert a main effect on functioning. However, there was a statistically significant interaction effect of daily stressors and war experiences on level of functional impairment. When we ran regression equations at high and low levels of daily stress, we found the effect of war experiences statistically significant under both high and low levels of daily stress. Under conditions of *high* daily stress, greater exposure to war-related traumatic stress was associated with *less* functional impairment ( $\beta = -.25$ ,  $p < .05$ ; see Figure 3). Under conditions of *low* daily stress, however, greater exposure





**Figure 2** IES-R (PTSD) scores for men ( $n = 160$ ) at low and high daily stress levels as a function of low and high experiences of war exposure.



**Figure 3** WHODAS-II (functional impairment) scores for women ( $n = 122$ ) at low and high daily stress levels as a function of low and high experiences of war exposure.

to war-related traumatic stress was associated with greater functional impairment ( $\beta = .40, p < .01$ ). For men, the full model was also significant, accounting for 29% of the variance in scores on IES-R (Adj.  $R^2 = .293; F(4, 155) = 13.87, p < .001$ ), and, as in the women's model, older men and those with more daily stressors reported more functional impairment, while war experiences did not predict impairment. Unlike the women's

model, the interaction effect of daily stressors and war experiences on functioning was not statistically significant.

## DISCUSSION

Our first hypothesis predicted that the level of daily stressors would be a stronger predictor than war experiences of general distress, depression, and functional impairment. Findings differed somewhat by gender. For women, results were highly consistent with our hypothesis: daily stressors significantly predicted all mental health outcomes, while war experiences had a direct effect only on PTSD. For men, daily stressors and war experiences both contributed to levels of general distress and depression; however, daily stressors were a stronger predictor than war experiences of depression. Similar to our findings with women, daily stressors had a direct effect on functional impairment, while war experiences did not.

With regard to PTSD, our findings varied by gender. For women, daily stressors and war experiences contributed equally to levels of trauma symptoms. This somewhat puzzling finding cannot be explained in terms of an interaction effect, as the interaction of daily stressors and war experiences was not significant for women. One possible explanation for the direct effect of daily stressors on PTSD may lie in the potentially traumatic nature of certain items on the daily stressor scale. The ADSS includes items regarding domestic violence and physical safety in and out of the home. Given the widespread nature of domestic violence in Afghanistan, and the increasingly common experience of sexual assault since the fall of the Taliban, these items – which might best be conceptualized as *non-war related traumatic stressors* – may help explain the main effect of what we have termed daily stressors on levels of PTSD symptoms among women.

For men, in contrast, war experiences were not directly predictive of PTSD symptom levels; only daily stressors exerted a direct effect on PTSD. However, an analysis of the significant interaction between these two variables shed light on this somewhat unexpected finding. Under conditions of high daily stress, the relationship between war experiences and PTSD was not significant; however, under conditions of low daily stress, war experiences were positively related to PTSD symptom level. Although this finding supports our second hypothesis that daily stress would moderate the relationship of war experiences and PTSD symptom levels, the moderating effect was the opposite of what we had expected based on Kubiak's (2005) argument that chronic (non-traumatic) stress depletes people's coping resources and leaves them more vulnerable to developing enduring post-traumatic stress reactions in response to specific traumatic events. In fact, our findings suggest that, for the men in our study, when daily stressors such as poverty, unemployment, family conflict, and social isolation are

high, they effectively dwarf the clinical salience of previously experienced war-related violence. That is, chronic daily stress seems to suppress the relationship between war experiences and PTSD. Paradoxically, when the material and social conditions of daily life are less stressful, there may be a greater vulnerability to the traumatic impact of war-related experiences of violence and loss. This finding suggests a parallel to the common clinical observation that post-traumatic stress reactions often arise after, rather than during, periods of traumatic stress, when the struggle for basic survival abates and the reality of traumatic experiences can be more fully acknowledged.

Alternatively, the positive relationship of war exposure to PTSD only under conditions of low daily stress may reflect something of a saturation effect. When symptoms of trauma are already high as a result of either chronic daily stressors or war exposure, there may be little room for the other variable to exert any significant additional effect on PTSD symptomatology.

We also found, somewhat unexpectedly, that among women war experiences were more strongly related to psychosocial functioning and depression under conditions of low daily stress. Again, it may be that when daily stress is high, its deleterious impact on functioning and its contribution to depressive symptoms essentially reduces the etiological significance of war experiences; that is, what women have experienced during the war becomes less of an explanatory factor in their current functioning and level of depression than the current set of stressors with which they are struggling. Consequently, the relationships between war experiences and functioning, and between war experiences and depression, become both statistically and clinically less significant under conditions of high daily stress. It is unclear, however, why this interaction effect was evident only for women, and not men. It may be that women's generally higher level of daily stress (relative to men) makes it a more salient predictor of functional impairment, precisely because the stressful nature of everyday life for many women in Kabul overshadows the potential impact of war-related violence and loss on their day-to-day functioning.

#### *GENDER AND DAILY STRESS*

Although our different sampling strategies for women and men precluded statistical comparison, our findings suggest that women reported higher levels of daily stress than men, while women and men reported roughly the same level of exposure to war-related violence and loss. The years of warfare in Afghanistan, and the civil war in Kabul in particular, exposed most of the city's population to prolonged, extreme violence. Men and women have both had to bury their dead, learn to live with their own

war-related injuries or care for injured family members, and deal with the loss of their homes and possessions. Daily stressors, in contrast, exert a somewhat greater toll on women, though we are cautious about overstating this difference, which was, in practical terms, fairly modest. As documented in a recent study of women in Kabul (CARITAS, 2004), and in recent reports on the progress of development in Afghanistan (Rubin et al., 2005; UNDP, 2005), women face a particularly daunting set of obstacles. They have markedly lower levels of literacy than men, generally lack even the limited education and job training that men have, face enormous perinatal health risks, and are much more likely than men to be victims of domestic abuse in a cultural context where violence against women is widely tolerated. For widows who are the head of their household, the financial challenges are formidable in a city without an established system of social welfare. Although the Taliban are no longer in power, and their legal restrictions on women's mobility and access to health and educational resources have been lifted, in practice there remains considerable cultural resistance to women and girls achieving the same rights and access to essential resources that men enjoy. Schools for girls have been built, and girls dressed in their school uniforms on their way to or from school have become a routine sight. At the same time, newly built schools for girls have been attacked with explosives, and community leaders in some areas have discouraged parents from sending their girls to school. Cultural norms that restrict women's freedom of expression and movement also remain, and women who violate those norms may face dire consequences, as evidenced by the slaying of Shaima Rezayee, a young woman killed by her brothers in 2005 because her family objected to her hosting a popular musical television show in Kabul (*Chicago Tribune*, May 21, 2005).

This is not to suggest that changes favoring women's wellbeing are not underway. More girls are attending primary and secondary school, and more women are receiving a university education and entering the workforce. A growing number of women are exchanging the *burka* for less restrictive clothing, and women have recently become active participants in the country's newly elected parliament. Our point is simply that the impact of daily stressors still falls somewhat more heavily on women's shoulders, as social, economic, and cultural conditions have been slow to change.

In sum, our findings underscore the powerful relationship of stressful social conditions – the indirect effects of prolonged organized violence – on mental health. Although we found several differences between women and men in the relative salience and interaction of daily stressors and war experiences as predictors of mental health status, the commonalities far outweighed the differences. For women and men alike, the stressful

conditions of everyday life in Kabul explain a great deal of variance in the quality of their mental health and psychosocial functioning.

#### *IMPLICATIONS FOR RESEARCH AND INTERVENTIONS*

As we noted earlier, research on the mental health of war-affected populations in conflict and post-conflict settings has been focused primarily on the direct psychological sequelae of exposure to political violence. Typically, those sequelae have been operationalized in terms of symptoms of PTSD and to a lesser extent, other categories of distress. The findings of the present study suggest the need for a broadening of our conceptual and methodological foci, so that greater attention is paid to the mental health effects of ongoing stressful social conditions, which we have termed *daily stressors*. Our findings also underscore the importance of broadening our outcomes of interest beyond PTSD, which, though clearly important, is but one of several mental health outcomes that are salient in conflict and post-conflict settings. Such outcomes include categories of distress familiar to western clinicians such as depression, anxiety, and psychosocial functioning, as well as indigenous or culturally specific symptoms and syndromes of distress that are meaningful in local cultural contexts.

With regard to mental health interventions, our findings suggest that traditional clinical interventions that focus narrowly on ameliorating symptoms of distress, and on PTSD in particular, are likely to be less effective than more holistic interventions that address the impact of daily stressors on people's mental health and psychosocial wellbeing. Specifically, our data suggest that effective interventions are likely to be those that focus on enhancing social support networks, reducing family conflict, helping people gain employment-relevant education and skills, increasing their access to low interest loans for small businesses (e.g., through microenterprise programs), and developing community empowerment projects (e.g., neighborhood watch programs, community health promotion projects, literacy campaigns) that enable people to take greater control over the resources that affect their lives, thereby reducing their level of daily stress. Clearly, such activities fall outside the usual realm of clinical interventions; however, to the extent that daily stressors such as those identified in this study exert a powerful influence on mental health, our interventions, if they are to be relevant, will need to adopt a somewhat broader focus than that to which we are accustomed. Given the breadth of expertise that such holistic interventions are likely to require, it may be fruitful to foster cross-disciplinary collaborations in which people with diverse areas of experience (e.g., mental health, literacy work, community organizing, vocational training, public health) pool their efforts, ideas and resources. The importance of such collaborative efforts in providing

holistic mental health and psychosocial interventions in war-affected areas was recently emphasized by van Ommeren and his colleagues at the World Health Organization (van Ommeren, Saxena, & Saraceno, 2005). Their paper echoes our concern that narrowly focused trauma interventions may have a limited impact, and may risk being perceived as out of sync with the needs and priorities of local communities.

Is there a place for traditional western mental health interventions such as psychiatric medications and psychotherapy in ameliorating the distress so commonly experienced within war-affected populations? We strongly believe there is. Psychotropic medications can restore basic psychophysiological functioning so that people are better able to cope with daily stressors and to engage in community activities, while various approaches to group-based verbal and somatic therapies may restore social ties and provide spaces in which participants can both normalize and learn to manage post-traumatic stress reactions (Hubbard & Pearson, 2004). This may be particularly important for torture survivors, for whom post-traumatic stress responses are more likely to be severe compared to non-tortured individuals within war-affected populations (Mollica et al., 1998). As Hubbard and Pearson (2004) have noted, simply altering social conditions may not be sufficient to alleviate suffering among severely traumatized individuals. In fact, our findings suggest that as social conditions become less stressful, the effects of previously experienced war trauma may become more evident. This suggests that trauma-focused interventions that address the impact of war-related violence and loss may be most useful *after* the implementation of psychosocial interventions that target the more immediate stressors affecting people's daily lives.

Our concern here is with the primacy and centrality that trauma-focused clinical interventions are reflexively accorded, and with their limited capacity either to alter the daily stressors that so powerfully affect people's wellbeing, or to enhance people's capacity to cope effectively with those stressors. We are also concerned that a narrow focus on providing trauma-focused treatments such as therapy or medication may inadvertently substitute professional assistance for the more empowering approach of restoring people's coping capacities by reducing the level of daily stress they experience.

### LIMITATIONS

There are several limitations to the present study. First, we relied on self-report measures, the validity of which can be affected by a variety of response biases (Bradburn, 1983), including demand characteristics of the data gathering context itself (Miller, 2004). As we noted earlier, men were interviewed in relatively public settings, whereas women were interviewed

in the privacy of their homes. Within Afghan culture, men are generally discouraged from acknowledging or expressing distressing emotions reflecting psychological suffering. Consequently, interviewing men about symptoms of distress and impaired functioning in settings that lacked sufficient privacy may have contributed to the lower rates of distress and impaired functioning among men compared to women in this study. Moreover, the interviews were read aloud to male participants by male interviewers, which may have further contributed to a tendency to minimize the acknowledgment of distress. Unfortunately, low literacy rates in Afghanistan require that questionnaires be read aloud, and it would not have been culturally acceptable for the female members of our research team to have administered the questionnaires to men in the community; nor, however, is it clear that female surveyors would have elicited more accurate responses from men.

A second limitation concerns the structure of the Afghan Daily Stressors Scale. Unlike the AWES, which is a straightforward measure of exposure to war experiences, the ADSS measures the extent to which a particular stressor is actually experienced as stressful. Thus, exposure to a stressor is *implied* by the perception of it as stressful; however, it is possible that people may have been exposed to certain stressors yet not perceived or acknowledged them to be particularly stressful. This might help explain why relatively few women (24 or 15%) indicated that they had found being beaten at home somewhat or very stressful ('few' relative to the common perception of spouse abuse as widespread). It may be that more women were being abused, but chose to minimize the stressful nature of the experience, given the difficulty of altering or leaving their abusive environment.<sup>1</sup>

For the men's data, several of our measures demonstrated only moderate levels of internal consistency. Because the Afghan Daily Stressors Scale assesses a diverse range of stressful events rather than a unitary latent construct, a moderate degree of internal consistency is neither unexpected nor problematic. However, for measures of latent constructs, such as psychiatric syndromes, lower levels of internal consistency may mask potentially significant relationships among variables. However, the fact that we found highly significant relationships among the variables of interest in this study despite the moderate level of internal consistency in some of our mental health measures in the men's sample underscores the robustness of our findings (Dale Berger, personal communication, April 12, 2005).

Our sample of women, though not wholly random, can be assumed to be reasonably representative of women in Kabul. The 100% participation rate among women reduced any self-selection bias, and most women in Kabul are at home during the day (when we recruited our female participants), lending support to the representativeness of our female sample.<sup>2</sup>

The recruitment of men was based to a greater extent on convenience sampling, as men are not at home during the day and are not found in any single locale. Whether recruiting men on the street, in mosques, and in shops introduced any systematic bias into the sample is difficult to determine. It is possible that healthier men may have opted to participate in the study, with more distressed men preferring not to talk about their distress; however, the 95% participation rate argues against this. Conversely, it is also possible that psychologically healthier men would more likely be working (because of higher levels of functioning) and so would have been less available to participate in the study than men whose distress left them unable to work; however, the majority of men in the present study were either employed as shop owners, tradesmen, or unskilled day laborers, or were unemployed due to a lack of employment opportunities rather than psychological impairment. Based on these considerations, we assume that our sample of men is reasonably representative of adult males in Kabul.

Finally, this was a correlational study, which precludes any firm conclusions about the causal nature of the relationships among variables. We have suggested, based on theory and previous research, that war experiences and daily stressors contribute – both directly and indirectly – to emotional distress and impaired psychosocial functioning. However, because the ADSS measures the extent to which different daily stressors are perceived as stressful, it is possible that individuals experiencing higher levels of psychiatric symptomatology or functional impairment may have tended to perceive daily stressors as more stressful than people with better mental health, contributing to the positive correlations between scores on the ADSS and the various mental health outcome variables. Conversely, however, there is an extensive body of research within the stress and coping literature documenting the negative impact of daily stressors (often called *daily hassles*) on mental health (Kanner, Coyne, Schaefer, & Lazarus, 1981; Zarski, 1984); in fact, daily hassles have been found to exert a greater adverse effect on people's mental health than major life stressors, including traumatic stressors such as the loss of a loved one (Sanderson, 2004). Our findings in the present study are generally consistent with that literature, which lends support to viewing the direction of causality as primarily flowing from daily stressors to mental health, rather than the reverse. Nonetheless, we do believe there is likely to be a certain degree of reciprocal influence, in which daily stressors have a major impact on mental health, and poor mental health depletes people's coping capacity for dealing with daily stressors, thereby strengthening the extent to which those stressors are actually perceived as stressful. In order to be able to separate exposure to daily stressors from the degree to which they are perceived as stressful, we are currently modifying the ADSS to include



separate responses for 'exposure' and 'perceived stressfulness of exposure' for each item.

## CONCLUSION

The findings of the present study lend support to the importance of understanding not only the *direct* effects of war experiences on people's mental health, but also the indirect impact that armed conflict has on psychological wellbeing through the production of highly stressful social conditions. Such conditions are powerfully linked to mental health; they affect people on a daily basis, and help shape the broader context in which survivors of armed conflict must cope with and recover from war-related experiences of trauma. Fortunately, many daily stressors can be targeted for change through community-based interventions. In Afghanistan, for example, The Noor Education Center (NEC), a small non-profit based in Kabul, integrates the provision of social support, literacy training, psychosocial and conflict resolution training, and job skills development to groups of women in various regions of the country. Though not explicitly defined as a mental health project, the work of NEC represents an innovative and empirically sound approach to improving women's mental health; it targets key variables (lack of social support, poverty, illiteracy, and unemployment) identified in our study as major ongoing stressors affecting women's (and men's) psychological wellbeing. Although not yet evaluated (an evaluation is currently underway), the approach of NEC approach represents a promising complement to traditional clinical models of intervention, an approach based on fostering resilience and helping people adapt more effectively to the stressful demands of a society recovering from prolonged violent conflict.

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## NOTES

1. Asking women about experiences of being beaten in their home is a delicate and tricky endeavor, particularly in Afghanistan, where women move in with their husband's family upon getting married. A woman's in-laws may beat her, and stories abound of mothers-in-law who report to their son about his wife's behavior during the day. Because the interviews took place in women's homes, often within earshot of other women in the home, it is quite plausible

that some women denied being beaten as a self-protective measure, to avoid saying anything that might be overheard and subsequently reported to an abusive husband.

2. The potential for cluster effects in our sample of women is important, as two women were interviewed in several households. Unfortunately, the research team did not document which households included more than one female participant, making an analysis of cluster effects impossible.

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