

The Association of Domestic Violence and Social Resources With Functioning in an Adult Trauma-Affected Sample Living in Kurdistan, Northern Iraq

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Abstract

Domestic violence (DV) and other experienced trauma types increase the risk for impaired functioning. Access to social resources may provide a buffer to existing risks and allow individuals to continue and build functioning. This cross-sectional study investigated the direct effects of DV and access to social resources (perceived social support, social integration, and frequency of social contact), as well as their potential interactive effects, on daily functioning among 894 male and female trauma survivors who attended primary care clinics in Kurdistan, Iraq in 2009 and 2010. Experiencing DV was not associated with functioning for males ($p=.15$) or females ($p=.60$), suggesting that in the context of a trauma-affected sample, the experience

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of DV may not significantly increase the risk for functional impairment. Greater amounts of social integration were associated with less functional impairment among males ($p < .01$) and females ($p < .05$); social integration was associated with less functional impairment among males only ($p < .01$); and frequency of social contact was associated with less functional impairment among females only ($p < .05$), indicating that the association between social resource type and functioning differed by gender. Social resources had a stronger effect on functioning among men compared to women. Among males who experienced DV, social integration was the only social resource associated with less functional impairment ($p < .01$); among male trauma survivors who did not experience DV, social support was the only resource associated with less functional impairment ($p < .01$). Further investigation into these associations is warranted to inform intervention strategies for survivors of DV and other traumas in post-conflict settings.

Keywords

domestic violence, Iraq, conflict, trauma, functioning, social resources

Introduction

Domestic violence (DV) is defined as physical, sexual, or emotional abuse that is perpetrated by an intimate partner, family member, or someone else living in an individual's home (U.S. Department Health & Human Services, 2011). DV has been referred to in the literature as intimate partner violence (IPV), although IPV has also been defined as a subtype of DV referring to abuse that is perpetrated specifically by a spouse, partner, or ex-partner (Williams, Ghandour, & Kub, 2008). Both DV and IPV are considerable public health problems with high prevalence in countries across the world (Garcia-Moreno, Jansen, Ellsberg, Heise, & Watts, 2006; Trevillion, Oram, Feder, & Howard, 2012). A multi-country study conducted by the World Health Organization (WHO) found that lifetime prevalence of IPV for women ranged from 15% to 71% (Garcia-Moreno et al., 2006).

Exposure to IPV is associated with a range of mental and physical health problems (e.g., Bonomi et al., 2006; Campbell, 2002; Coker, 2007; Coker, Hopenhayn, DeSimone, Bush, & Crofford, 2009; Ellsberg, Jansen, Heise, Watts, & Garcia-Moreno, 2008) but fewer studies have investigated the relationship between IPV and functioning, defined as the ability to perform usual daily tasks and activities. Two studies found that IPV was associated with impaired social functioning (Bonomi et al., 2006; McCaw, Golding, Farley, & Minkoff, 2007), and Ellsberg et al. (2008), using data from the WHO multi-country study, found

that women who had experienced IPV reported increased difficulty in performing daily activities. One study that used the broader DV definition conducted amid violence in the Democratic Republic of the Congo noted that exposure to DV and other traumas was not directly related to functional impairment. However, trauma exposure increased posttraumatic stress (PTS) symptoms in men and women, and this in turn was related to increased functional impairment, suggesting an indirect effect of DV on functional impairment mediated by mental health problems (Veling, Hall, & Joosse, 2013).

The majority of the research literature focuses on male perpetration; however, women can also be perpetrators (Williams et al., 2008). There are currently no published global prevalence estimates of DV or IPV experienced by males (Trevillion et al., 2012). A population-based study of the short- and long-term effects of IPV on both females and males in the United States found that 29% of females and 23% of males reported ever experiencing IPV (Coker, Davis, et al., 2002). A study conducted in Nigeria found similar estimates: 30% of females and 24% of males reported ever experiencing IPV (Oladepo, Yusuf, & Arulogun, 2011).

These studies focused on populations in which DV or IPV was the primary trauma investigated. Fewer studies have analyzed the incidence of DV or IPV among populations that have been exposed to multiple traumas, especially those that may occur in times of war or conflict (Usta, Farver, & Zein, 2008). Iraqi Kurds, a population of about 5.5 million living in a semi-autonomous region of Northern Iraq, represent a population that has experienced an enormous amount of conflict and trauma over the past few decades. Similar to other populations of trauma survivors and those in post-conflict settings, however, there is little empirical information about the prevalence of DV or IPV.

Cultural factors unrelated to the conflict in Iraq may play an important role in the degree and perception of DV in Kurdistan. There are currently few laws protecting women against DV, and the ones that exist are rarely enforced (Minwalla, 2011). Although in some cases family members are supportive, it is not uncommon for incidents of violence to be perpetrated by members of the husband's family, and sometimes the victim's family, in addition to the husband himself (Minwalla, 2011). A 2007 study in Iraq found that 52.9% of women surveyed in Kurdistan responded that they believed violence against women was increasing (Women for Women International, 2008). The WHO recently completed a nationally representative study of violence against women in Iraq and found that 21% of females reported being abused by their husbands and that 50% of males and 59% of females reported that it was acceptable for a man to beat his wife if she disobeyed him (Inter-Agency Information and Analysis Unit, 2010).

Past research has indicated that social resources may modify the relationship between interpersonal violence and adverse psychosocial outcomes

(Escribà-Agüir et al., 2010; Glass, Perrin, Campbell, & Soeken, 2007), including perceived emotional support (Coker, Smith, et al., 2002). However, it is presently unknown whether social support is protective against impairments in functioning following DV among populations with significant trauma exposure, such as in Iraqi Kurdistan. Furthermore, these relationships have not been systematically investigated among male survivors of DV. This is an important gap to address as previous work on social resources and depression indicate a modifying role of gender; a lack of social resources is associated with a higher risk for poor psychosocial outcomes among women than for men (Kendler, 2005; Kendler & Gardner, 2014).

Given the lack of studies that have specifically explored DV among trauma-affected populations, the current study investigates the association of DV and social resources with functioning among a sample of male and female trauma survivors in Iraqi Kurdistan. In this study, we use the term DV rather than IPV, which was the term presented to the study participants and refers to any physical, psychological, or sexual violence that occurs between family members or intimate partners.

We build on prior research by including three types of social resources (Hall, Bonanno, Bolton, & Bass, 2014): *perceived social support*, which refers to having friends, family, or community members available and willing to help in a time of crisis; *social integration*, which refers to the strength of one's daily relationships with friends and family and a sense of belonging in the community; and *frequency of social contact*, which refers to the regular amount of contact with friends or family one has.

In this study, among a sample of clinic-attending male and female trauma survivors in Kurdistan, Iraq, we investigate (a) the association between DV and functioning, (b) the relationship between three social resource constructs with functioning, and (c) if the associations between social resources and functioning are moderated by DV experience. We hypothesize that DV will be associated with greater levels of impaired functioning, social resources will be associated with less impaired functioning, and that the effect of social resources on functioning will be greater among those who experienced DV compared with those who have not. To ensure an appropriate local interpretation of the DV exposure question, we additionally conducted a brief qualitative study following the quantitative analysis.

Method

Participants and Procedure

The present study is an analysis of data collected as part of an ongoing monitoring process of a clinic-based mental health program in Iraqi Kurdistan.

These data were also used to screen for participants for a randomized controlled trial (RCT) of mental health interventions for torture survivors in Iraqi Kurdistan, the methods for which are described elsewhere (Bolton et al., 2014). Data were collected between April 2009 and November 2010 from individuals who came to community mental health workers (CMHWs) from multiple sources. Some were referred by primary care physicians who thought the individuals might have mental health problems; others heard about the services from local torture survivor outreach organizations, former prisoner associations, and radio advertisements. The CMHWs, who were professionally trained as nurses, physician assistants, and pharmacist assistants, administered the assessment to the study participants after obtaining informed consent. All CMHWs received training in the mental health assessment. Interviews were conducted in private locations within the mental health clinics and took approximately 40 to 60 min to complete on average. Inclusion criteria for this study included being 18 years or older and reporting lifetime witnessing or experiencing at least one of eight possible traumatic events (see measures below). Among 974 clients with monitoring data collected during the specified dates, 895 (91.9%) were eligible based on the trauma exposure criterion and were included in the current analysis.

This secondary data analysis of existing program monitoring data was designated with exempt status by the institutional review board (IRB) at Johns Hopkins University.

Measures

Functioning and mental health assessments were adapted for use with this population through a mixed-methods approach beginning with a qualitative study (Bolton, Michalopoulos, Ahmed, Murray, & Bass, 2013) followed by an instrument adaptation and validation study (Bolton et al., 2014).

Functional impairment, the primary outcome of this study, was assessed using a locally developed 20-item gender-specific scale (see supplementary file available at jiv.sagepub.com/supplemental). Details on methods for developing the functioning scales are described in Bolton and Tang (2001) and by Johns Hopkins Bloomberg School of Public Health (2013). Free-listing techniques were used to determine daily tasks that were critical and important to the local community. Based on the results of free list surveys, quantitative assessments of functioning were created and tested for internal consistency, test-retest reliability, and criterion validity. Gender specific scales were created because there were several tasks that applied primarily to men or women. The items in the final measures prompted study participants to rate how much difficulty they had completing each of 20 daily tasks related to caring for self, family, and the community as compared with other same

gender peers of similar age. For males, items included tasks such as “providing for the family,” “looking after family behaviors,” and “labor.” For females, items included tasks such as “housework,” “cooking,” and “caring for family members.” Responses were on a Likert-type scale, and an average functional impairment score was calculated across the items that could range from 0 (indicating *no functional impairment*) to 4 (*not able to function*). The scales had strong internal reliability ($\alpha = .91$ for both men and women).

DV and experience of other traumatic events was obtained by asking participants if they had personally experienced or witnessed any of the following eight events during their lifetime:

- DV
- Physical torture
- Imprisonment
- Gas attacks
- Military attacks
- Sexual assault/rape
- A loved one being murdered, assaulted, or experiencing a severe accident
- Loss of home and/or property

Social resources were assessed using seven items identified during the initial qualitative study as important and appropriate resources in the local context by study participants (Bolton et al., 2013). We defined three constructs of social resources based on these seven items (Hall et al., 2014): *perceived social support* and *social integration*, which refer to functional social provisions (Weiss, 1974), and *frequency of social contact*, which refers to the characteristics of the structural component of one’s social network (Berkman, Glass, Brisette, & Seeman, 2000; Cutrona, 1986).

Perceived social support was assessed by a participant’s responses to two items: “I know people who will listen and understand me when I need to talk” and “In a crisis, I would have the support I need from family and friends.” *Social integration* was assessed by a participant’s responses to three items: “I am happy with the friendships I have,” “I have people with whom I can do enjoyable things,” and “I feel I belong in my community.” Responses for both perceived social support and social integration were on Likert-type scales ranging from 0 (*strongly agree*) to 3 (*strongly disagree*). Total scores for each scale were calculated by first reverse coding and then summing the item responses. This reverse coding made higher scores associated with greater perceived social support and social integration. Cronbach’s alpha for perceived social support was .72 and was .76 for social integration.

Frequency of social contact was assessed using two items: “In the last 2 weeks, how often did you socially connect with friends” and “In the last 2 weeks, how often did you socially connect with other families.” Responses were on a Likert-type scale with the responses as follows: 0 (*0-1 times*), 1 (*2-4 times*), 2 (*5-7 times*), and 3 (*greater than 8 times*). A frequency of social contact score was calculated by summing the responses from the two items. Cronbach’s alpha for frequency of social contact was .72.

Depression and anxiety were measured with the Hopkins Symptom Checklist–25 (HSCL-25; Hesbacher, Rickels, Morris, Newman, & Rosenfeld, 1980; Winokur, Winokur, Rickels, & Cox, 1984). Five additional items following the same structure as the original items were added to the Depression scale based on the previous qualitative study (Bolton et al., 2013). Participants were asked how often they had experienced each symptom over the past 2 weeks. Responses for all items, including the additional local symptoms, were on a Likert-type scale ranging from 0 (*never*) to 3 (*always*). An average depression and an average anxiety scores were calculated. Internal consistency was very good for both the Depression ($\alpha = .90$) and the Anxiety ($\alpha = .84$) scale.

PTS symptoms were measured with 29 items from the Harvard Trauma Questionnaire (Mollica et al., 1992). Two additional items were added to the PTS scale based on the previous qualitative study (Bolton et al., 2013). Responses were on the same scale as for the depression/anxiety symptoms, and an average PTS score was calculated. Internal consistency for the PTS scale was very good ($\alpha = .92$).

Demographic characteristics included in this study were gender, age, educational attainment (none/primary/secondary/bachelor’s degree or higher), employment status (not working/irregular work/regular work/self-employed), marital status (single/married/widowed/divorced), number of children, and self-reported disability (physical or mental).

Data Analysis

Descriptive characteristics were summarized separately by gender using means and standard deviations for continuous variables and percentages for categorical variables. Independent samples *t* tests and Pearson’s chi-square tests were used to compare values between men and women. Chi-square tests were also used to describe differences in trauma histories. Missing data on predictors (DV and social resources) were low (<1%); therefore, single mean imputation was used to impute missing values. Multiple linear regression models were estimated to determine adjusted associations between DV and the three social resource types, with functional impairment. These models

were estimated separately in the male and female samples given potential differences in DV experiences between the genders. Following estimation of the direct effect models, we added three interaction terms to each model of each social resource multiplied by DV to assess whether the association of social resources and functioning was moderated by DV status. Mental health symptoms and demographic characteristics (described above) were included in the models to control for potentially confounding effects. All analyses were conducted using Stata, Version 12 (StataCorp, 2011).

Qualitative Investigation of DV Exposure

Following the quantitative analysis, we conducted a brief post-hoc qualitative investigation in January and February 2015 to explore how the DV exposure question may have been interpreted by study participants. In-depth interviews were conducted by a study investigator (A.A.) with 18 clients receiving mental health services at the same clinics where we conducted the original research. Participants were asked (a) to define “domestic violence” as translated in the clinic assessment, (b) to provide examples of DV, (c) to indicate whether they believed participants in a research study would respond “yes” to the DV item if they had experienced abuse as a child but not as an adult, (d) if men might misunderstand the item to refer to DV *perpetration* rather than experiencing, and (e) whether participants would feel comfortable reporting DV in a research study setting. The purpose of this qualitative investigation was to assess how the DV item may have been interpreted by our original study participants and if that interpretation would modify the inference of our original study results. Details on the methods and results of this investigation are included in the online supplementary file.

Results

The study sample consisted of 437 male and 457 female adults in Kurdistan, Iraq. One participant had missing data on the functioning items and was dropped from the analysis. Sample characteristics are summarized in Table 1. DV was the only trauma type experienced by a significantly larger proportion of females compared with males (36.3%; $\chi^2 = 22.99, p < .0001$), although it was also reported by a substantial percentage of males (21.7%; Table 2). For all other traumas, men reported significantly greater exposure except sexual assault, for which there was no significant difference ($\chi^2 = 2.59, p = .137$). Among those in the total sample who experienced DV ($n = 261$), 89.3% experienced or witnessed at least one additional trauma.

Table 1. Descriptive Characteristics of Study Sample.

	Total Sample		Males		Females		t or χ^2
	(n = 894)		(n = 437)		(n = 457)		
	n or M	% or SD	n or M	% or SD	n or M	% or SD	
Marital status							
Single	213	23.8	87	19.9	126	27.6	
Married	606	67.8	347	79.4	259	56.7	82.25***
Widowed	67	7.5	2	0.5	65	14.2	
Divorced	8	0.9	1	0.2	7	1.5	
Employment							
Not working	484	54.1	156	35.7	328	71.8	
Irregular work	140	15.7	81	18.5	59	12.9	129.96***
Regular work	195	21.8	151	34.6	44	9.6	
Self-employed	75	8.4	49	11.2	26	5.7	
Education							
None	422	47.2	150	34.3	272	59.5	
Primary	257	28.8	155	35.5	102	22.3	56.02***
Secondary	161	18.0	98	22.4	63	13.8	
Bachelor's or higher	54	6.0	34	7.8	20	4.4	
Disability	496	55.5	233	53.3	263	57.6	1.62
Age	39.34	14.90	43.15	14.80	35.69	14.10	-7.72***
Number of children	3.84	3.64	4.59	3.93	3.12	3.17	-6.19***
Number of traumas	5.36	3.36	6.36	3.28	4.41	3.16	-9.07***
Depression	1.40	0.56	1.26	0.54	1.54	0.54	7.77***
Anxiety	1.14	0.55	0.99	0.50	1.28	0.56	8.33***
Posttraumatic stress	1.15	0.49	1.06	0.46	1.24	0.50	5.59***
Perceived social support	4.33	1.66	4.38	1.60	4.28	1.72	-0.88
Social integration	6.61	2.27	6.66	2.19	6.56	2.34	-0.64
Frequency of social contact	1.43	1.48	1.78	1.61	1.09	1.26	-7.13***
Functioning	1.67	0.83	1.56	0.70	1.77	0.86	5.97***

*** $p < .0001$.

Results from the multiple linear regression models (Table 3) indicated that there was no significant difference in functional impairment between those who experienced DV and those who did not experience DV for either males, $\beta = .05$, $t(13, 423) = 1.46$, $p = .15$, or females, $\beta = .02$, $t(13, 443) = 0.53$, $p =$

Table 2. Proportion of Study Sample Experiencing and Witnessing Traumatic Events.

Trauma Type	Personally Experienced				Witnessed Happening to Others				χ^2
	Males		Females		Males		Females		
	n	%	n	%	n	%	n	%	
	n = 437		n = 457		n = 437		n = 457		
	n	%	n	%	n	%	n	%	
Domestic violence	95	21.7	166	36.3	94	21.5	135	29.5	7.56**
Sexual assault	19	4.4	11	2.4	44	10.1	17	3.7	14.16***
Torture	279	63.8	112	24.5	223	51.0	154	33.7	27.52***
Prison	312	71.4	120	26.3	256	58.6	182	39.8	31.45***
Gas attack	66	15.1	36	7.9	95	21.7	64	14.0	9.14**
Military attack	290	66.4	208	45.5	227	52.0	203	44.4	5.07*
Murder/assault/accident	115	26.3	70	15.3	111	25.4	84	18.4	6.45*
Loss of home/property	277	63.4	201	44.0	160	36.6	136	29.8	4.74*

*p < .05. **p < .01. ***p < .0001.

Table 3. Stratified Multiple Linear Regression Model Results of Functioning Among Males ($n = 437$) and Females ($n = 457$).

	Males			Females		
	B	SE	β	B	SE	β
DV (Ref. = No)	0.10	0.07	.05	0.04	0.07	.02
Perceived social support	-0.06**	0.02	-.13	-0.03	0.02	-.06
Social integration	-0.05**	0.02	-.15	-0.04*	0.02	-.10
Frequency of social contact	-0.03	0.02	-.06	-0.06*	0.03	-.08
Depression	0.45***	0.09	.31	0.48***	0.11	.30
Anxiety	0.20*	0.08	.13	0.05	0.08	.03
PTS	0.09	0.12	.06	0.41**	0.13	.24
	$R^2 = .50$			$R^2 = .43$		
	$F(13, 432) = 33.1, p < .001$			$F(13, 433) = 25.9, p < .001$		

Note. Model also adjusted for age, employment status, disability, and total number of trauma types experienced. DV = domestic violence; PTS = posttraumatic stress.

* $p < .05$. ** $p < .01$. *** $p < .0001$.

.60. Among males, direct effects of perceived social support, $\beta = -.13$, $t(13, 423) = -2.71$, $p < .01$, and social integration, $\beta = -.15$, $t(13, 423) = -3.16$, $p < .01$, were associated with significantly less functional impairment. Among females, social integration, $\beta = -.10$, $t(13, 443) = -2.11$, $p < .05$, and frequency of social contact, $\beta = -.08$, $t(13, 443) = -2.15$, $p < .05$, were associated with less functional impairment. Among the female sample, none of the social resource and DV interaction terms were significant. Among the male sample, there was a significant interaction between social integration and DV, $\beta = -.26$, $t(16, 420) = -2.04$, $p < .05$.

Table 4 presents results of the regression model among males stratified by DV status. Perceived social support was significantly associated with better functioning among men who did not experience DV, $\beta = -.17$, $t(12, 329) = -3.01$, $p < .01$, but not men who did experience DV. Social integration was significantly associated with better functioning among men who experienced DV, $\beta = -.38$, $t(12, 82) = -3.58$, $p < .01$, but not among those who did not experience DV. Frequency of social contact was not associated with functioning in either group of males.

Qualitative Study Results

Eighteen clients (10 females and 8 males) participated in the qualitative follow-up study. Key findings included the following.

Table 4. Association of Social Resources With Functioning Among Males Stratified by DV Experience ($n = 437$).

	Did Not Experience DV ($n = 342$)			Experienced DV ($n = 95$)		
	B	SE	β	B	SE	β
Perceived social support	-0.08**	0.03	-.17	0.01	0.05	.01
Social integration	-0.03	0.02	-.09	-0.12**	0.03	-.38
Frequency of social contact	-0.02	0.02	-.05	-0.08	0.05	-.16
	$R^2 = .50$			$R^2 = .49$		
	$F(12, 329) = 27.1, p < .001$			$F(12, 82) = 6.5$		

Note. Models also adjusted for age, employment status, disability, total number of trauma types experienced, depression, anxiety, and PTS symptoms. DV = domestic violence; PTS = posttraumatic stress. * $p < .05$. ** $p < .01$. *** $p < .0001$.

Definition of DV. Twelve participants defined DV explicitly as physical violence or verbal abuse within home. Two men described “treating other family members badly.” Two other men described family misunderstandings. Finally, two women described having their “rights restricted” by partners as a type of DV.

Examples of DV included 13 mentions of physical violence, 10 mentions of verbal abuse, five mentions of neglect, and four mentions of restricted rights.

Reporting child abuse as DV. Ten clients believed participants would report abuse that occurred during childhood in response to our DV question although only five described child abuse when asked for examples of DV.

Misunderstanding the DV item to refer to perpetration. Two clients thought that a participant might misunderstand the item to refer to perpetrating of DV rather than as a victim.

Underreporting of DV. Eleven participants believed that DV was likely to be underreported.

Discussion

This study investigated the associations between DV and three types of social resources with functioning among a clinic-based sample of adult trauma survivors in Kurdistan, Iraq. Our primary results indicated that (a) there was no

significant difference in level of functioning between trauma survivors who reported experiencing DV compared with trauma survivors who did not report DV; (b) perceived social support and social integration were associated with less functional impairment among males; among females, social integration and frequency of social contact was associated with less functional impairment; and (c) among males, the relationship between one social resource construct, *social integration*, and functioning showed statistically different associations by DV exposure.

Previous studies have found DV to be a significant risk factor for mental health problems, including depression, anxiety, and posttraumatic stress disorder (PTSD; Bonomi et al., 2006; Campbell, 2002; Coker, Davis, et al., 2002; Ellsberg et al., 2008), as well as functional impairment (Ellsberg et al., 2008; Rees et al., 2011). We explored among a sample that had experienced many types of severe traumas if those who experienced DV might report greater functional impairment than those who had not. We hypothesized that because DV is perpetrated by someone in the home and that exposure to DV may be chronic, it would lead to more difficulty carrying out daily activities, many of which are conducted in the home as well. Other types of traumas experienced in the context of Kurdistan were often perpetrated by strangers and less likely to be chronic (e.g., beatings, gas attacks). However, our results indicated that in a population that has experienced substantial amounts of trauma, the additional experience of DV was not associated with increased functional impairment.

We did find evidence to support the association between social resources and better functioning. Previous research has found a similar relationship between social support and psychosocial problems among populations experiencing trauma (Moak & Agrawal, 2010; Schumm, Briggs-Phillips, & Hobfoll, 2006), including populations in the Middle East (Dimitry, 2012; Tajvar, Fletcher, Grundy, & Arab, 2013). We also found that there were differences in the social resource-functioning relationships between males and females and between males who experienced DV compared with those who did not.

Among females, social support and frequency of social contact were associated with better functioning. The size of the effects, however, was smaller than previous studies of social resources and psychosocial outcomes among DV survivors (Coker, Smith, et al., 2002; Escribà-Agüir et al., 2010; Glass et al., 2007), and perceived social support was not associated with better functioning. Furthermore, the effect sizes for perceived social support and social integration were actually larger among men, contrary to previous research that indicated social support among women was more protective for depression than it was

for men (Kendler, 2005; Kendler & Gardner, 2014). These results, especially among female DV survivors, may be due to some of the cultural practices associated with violence in Kurdistan. When violence occurs within the home or family unit, there are severely limited options of social resources for those who have experienced the violence, especially if DV is perpetrated on a female victim by more than one family member (Minwalla, 2011). If multiple family members are involved in the abuse, then there are likely fewer outlets for social resources for the person being abused. In conflict-affected settings, violence against women increases not only via perpetration from soldiers or combatants in the conflict, but also by domestic partners as well (Usta et al., 2008).

Cultural constraints may also play a role in the ability of women to access their social networks: Our bivariate analyses in Table 1 indicated that males had significantly greater frequency of social contact than females. This result, taken together with our finding that greater frequency of social contact was associated with better functioning among women, suggests that access to social networks is a key buffer to impaired functioning but that this access is significantly limited. Women are often blamed for their own abuse and frequently shunned by family and community members (Minwalla, 2011), two of the most likely sources of social resources. Therefore, the types of social resources measured in our study may not be readily available among female DV survivors as they would be in other contexts. A study conducted in the United States by Glass et al. (2007) found that tangible support (e.g., place to stay in an emergency, emergency loans) was a more important protective factor for mental health symptoms than emotional support among female victims of violence from low-income families in urban settings. In the low-resource setting of Iraqi Kurdistan, tangible support may also be a more important social resource among female trauma survivors.

Among male trauma survivors who experienced DV, social integration was associated with better functioning, but for men who experienced other traumas but not DV, perceived social support was associated with better functioning. It is possible that social integration, which refers to the strength of one's sense of belonging in the community, may be a more important social resource in buffering the adverse functioning effects of DV given that DV may be a trauma that is potentially ongoing. Perceived social support, however, may be a more important social resource with regard to more singular traumatic events, which in the context of Kurdistan may include gas attacks or imprisonment, but perhaps not DV.

Limitations

Although the study instrument went through a rigorous translation, adaptation, and validation process, the item assessing DV exposure was limited in

several ways. First, we did not include a time reference, and so, we do not have information on when a participant who reported DV experienced the violence, including whether the violence occurred during childhood or adulthood.

Second, although our qualitative study suggested that the translation of the DV item resulted in an interpretation of DV that is generally consistent with a Western definition, we had no information on how many times the violence occurred, by whom it was perpetrated, or how DV experiences differed between men and women. Sexual violence against men in conflict settings, for example, often takes place during forced imprisonment (Sivakumaran, 2007), whereas violence against women may be perpetrated by soldiers, strangers, or intimate partners (Usta et al., 2008). We were not able to assess that distinction in our study.

Third, although previous research has indicated that men may experience DV at rates that are high (Coker, Davis, et al., 2002; Oladepo et al., 2011) and sometimes comparable with that of women (Boyle & Todd, 2003; Koenig et al., 2003), especially in conflict-affected Kurdistan during forced imprisonment (Sivakumaran, 2007), we had concerns that some men in our study may have misunderstood the question as their own *perpetrating* of DV rather than experiencing it. Our qualitative follow-up suggested that this type of response was possible but likely not common in our study. Future research would benefit from more refined and detailed items of DV.

Our present study was also unable to capture the nuance of these DV exposures, as men are more often exposed to verbal forms of aggression than physical assaults, and when assaulted, women suffer more severe injuries than do men (Koenig et al., 2003). There may have been overlap between trauma items that we were unable to detect; for example, DV experiences may have included sexual assault. Based on our qualitative interviews, DV was likely underreported by both men and women. For these reasons, we believe that further investigation into the experience and cultural understanding of DV in Iraq is warranted.

Several other limitations of the present study should be considered. First, as this was a cross-sectional investigation, causality cannot be inferred, and we acknowledge that the direction of the association between social resources and health outcomes may vary over time (Hall et al., 2014). Second, we may have limited statistical power in our stratified analyses. Our findings should be replicated in larger samples stratified by DV status and gender.

Although our study improved on previous work by including three different types of social resources, we were limited in the total amount of social resource items that we measured: The social resource scales had good internal reliability but were comprised of only seven items in total. There may be

other types of social resources such as tangible support that are specifically important for survivors of DV in the Kurdistan context, especially among females, that we neglected to include in our study. In addition, there was some overlap in item content between two items on the social resource and the functioning scales. A sensitivity analysis conducted without those items included in the functioning scales did not result in significantly different findings. We did not think there was sufficient evidence, therefore, to drop items from the 20-item version of the functioning scales that had been developed and validated for use with this population.

Conclusion

This study is one of the first to examine the relationships between DV and social resources with functioning among trauma survivors in a conflict-affected low-income setting, and is also one of only a few studies to include male survivors of DV. Our results indicate that among a population of trauma survivors in Kurdistan, DV does not appear to have a direct effect on functioning level in the context of other traumas. However, our preliminary findings do suggest that among males, the relationship between social resources and functioning might differ based on DV exposure. Future research with traumatized populations should explore whether the experience of DV modifies response to treatment or protective factors for psychosocial and functioning problems.

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