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Sorrow shared is halved? War trauma experienced by others and mental health among Darfuri asylum seekers

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ABSTRACT

Research suggests that the ethnic community plays a major role in the mental health of traumatized refugees arriving from collective societies. This study explored the relationships between war-related trauma and mental health separately for direct trauma exposure (i.e., events directly endorsed by asylum-seekers) and indirect trauma exposure (i.e., events endorsed by family, friends and other community members). Data for 300 Darfuri asylum-seekers living in Israel were obtained in a cross-sectional design. Hierarchical regressions were used to examine how direct versus indirect trauma exposure were associated with posttraumatic stress disorder (PTSD), depressive and anxiety symptoms and psychological well-being. Results showed that direct trauma exposure was associated with worse mental health symptoms and reduced well-being. In contrast, indirect trauma exposure to similar events of others was linked with fewer PTSD, depressive and anxiety symptoms and improved well-being. These findings offer preliminary insights into the nature of trauma and mental health in asylum-seekers from collective cultures: While trauma directly experienced by the individual is associated with increased risk for poor mental health; exposure to others' similar experiences may be associated with reduced emotional distress. Findings are discussed in terms of their potential implications for culturally sensitive assessment and group therapy in refugees.

1. Introduction

Among refugees and asylum-seekers, studies have consistently demonstrated a high prevalence of mental health disorders, including posttraumatic stress disorder (PTSD), depression and anxiety (Bogic et al., 2015; Lindert et al., 2009; Nickerson et al., 2010). Whilst the association between directly experienced trauma and PTSD in refugees is well-established, the effect of indirect trauma exposure (i.e., war trauma endured by close others) on mental health outcomes has received little attention. This issue is of clinical significance as traumas endured by significant others are included in the current definition of stressors used in the DSM-5 diagnosis of PTSD (APA, 2013; see Friedman et al., 2011, for review of empirical support). Moreover, many refugees with collective cultural background strongly identify with their group and are regularly concerned with the well-being of fellow refugees (Chase and Sapkota, 2017; Goodman, 2004; Simich et al., 2003). Thus, trauma experienced by relatives and neighbours may be highly relevant for the psychiatric symptoms of refugees. Here, we investigated the relationship between direct versus indirect trauma exposure and mental health outcomes in asylum-seekers arriving from a collective African culture in Darfur.

Since 2003, hundreds of thousands of Darfuri asylum seekers have fled across borders from war and persecution (United Human Rights Council, 2014). According to current estimates (Population and Immigration Authority, 2018), Israel has accepted approximately 7000 asylum seekers from Sudan, including those in the Darfur region. Nearly 500 of the early Darfuri arrivals were granted temporary residence status, which provides them with work permits and access to health care and social benefits. However, the rest hold temporary protection from deportation and are entitled to emergency medical care only (Yaron et al., 2013). Previous research with African asylum seekers in Israel revealed a wide array of war traumas and a high prevalence of mental health problems (Nakash et al., 2015; Slonim-Nevo and Lavie-Ajayi, 2017).

In refugee groups from collective communities, taking an active interest in the well-being of fellow community members is a culturally sanctioned and commonly practiced approach (Betancourt et al., 2015; Chase and Sapkota, 2017; Goodman, 2004). Relatives and neighbours play an important role in managing the individual's emotional distress to the extent of serving as their informal mental health providers (Chase

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and Sapkota, 2017; Savic et al., 2016). For example, in a study with Sudanese refugees in Australia, participants described the importance of their ethnic community in addressing mental health issues by offering collective support and advice (Savic et al., 2016). This form of communal coping often involves learning about others in similar situations as a mean to normalize negative experiences and feelings (Betancourt et al., 2015; Savic et al., 2016). In a similar vein, displaced Darfuri women reported receiving emotional support through sharing past traumas with their peers who had experienced similar events (Badri et al., 2013).

Thus, it is not surprising that there is growing evidence of the beneficial effects of social support, particularly from the ethnic community, as a coping resource for non-Western refugees (Simich et al., 2003; Schweitzer et al., 2006). Some research suggests that social support might serves as a buffer against the negative effects of pre-migration trauma on emotional distress (Nakash et al., 2017; Young, 2001). In other studies, lack of social support has been associated with increased PTSD and depressive symptoms, indicating that social support may contribute directly to refugee mental health (Bogic et al., 2015; Schweitzer et al., 2006).

After resettlement, refugees from non-Western societies often continue to seek the company of members of their own ethnic community, as peers become particularly salient after the forced separation from family and prior social networks (Goodman, 2004; Simich et al., 2003). In Goodman (2004), unaccompanied refugee adolescents from Sudan remained in constant contact with each other, despite widening geographical distance, following their resettlement in the US. The youth's strong sense of community was also revealed in their flight narratives, where their traumas were predominantly described as shared collective experiences (Goodman, 2004). Collectiveness of trauma exposure is also emphasized in a study of resettled Iraqi refugees in which fear for the safety of family left behind and traumas experienced by family members were associated with higher levels of PTSD symptoms (Nickerson et al., 2010). Similarly, a study of 63 Sudanese refugees resettled in Australia reported that separation from family members and the trauma histories of family were associated with poorer mental health outcomes (Schweitzer et al., 2006).

In sum, past research has emphasized the central role played by extended family, friends and ethnic community in refugees' identity and psychological well-being (Badri et al., 2013; Simich et al., 2003). Studies have also pointed to sharing past and current stressful experiences as a possible communal coping strategy among refugees (Badri et al., 2013; Savic et al., 2016), which can be reflected in the conceptualization of war traumas as collective experiences (Goodman, 2004). Despite this, most refugee trauma studies have focused on events directly experienced by the individual, and none has assessed indirect trauma exposure through peers and community members (Sigvardsdotter et al., 2016).

In the current study, we explored the prevalence of direct and indirect exposure to war-related trauma and their associations with mental health outcomes in Darfuri asylum-seekers residing in Israel. We measured exposure to the same set of events reported by asylum-seekers for different levels of proximity: Self, close others (family, friends), and distant others (community members). We then investigated how trauma exposure at different levels of proximity was linked to PTSD, depression and anxiety symptoms as well as to psychological well-being. Given the established link between cumulative direct trauma exposure and mental health outcomes, we anticipated that all four types of trauma exposure would be positively correlated with severity of distress reflected in PTSD, Anxiety and depression symptoms; and negatively correlated with levels of psychological well-being. We further expected that the strength of the relationships between trauma exposure and mental health outcomes would depend on proximity, such that they would be strongest for direct trauma exposure, next for indirect trauma exposure via close others and least for indirect trauma exposure through distant others.

2. Material and methods

2.1. Participants

A pilot sample of 30 participants completed the survey twice over a one-month interval. The results of the pilot were used to refine the questions asked in the main survey and to establish test-retest reliability. Because changes were made to scales as a result of feedback from the pilot test (see Slonim-Nevo et al., 2015), the pilot sample was not included in the present study. The main study sample consisted of 300 participants. Inclusion criteria were being a Darfuri asylum seeker, being aged 18 or older and living in Israel. Participants were recruited by trained Darfuri interviewers from their own community. The recruitment began with a list of Darfuri refugees who were members in an organization called "The Sons of Darfur". A random sampling was carried out whereby every alternate individual on the list was selected. However, this recruitment method was of limited effectiveness; many of the potential participants could not be reached due to outdated contact information. Therefore, our interviewers used additional recruitment strategies including a snowball sampling and approaching fellow Darfuri refugees in shelters, parks and other social gathering places. Care was taken to ensure that sampling was restricted to one individual per family to reduce the possibility of dependent observations. Additionally, recruitment was extended to the Darfuri community residing in Israel's southern city of Eilat. There, potential participants were informed in advance about the study via word of mouth. Data collection took place in a small group setting over the course of two days, with care taken to ensure that respondents worked individually. Ten participants from the group recruitment in Eilat were unable to finish their questionnaires due to time constraints and were excluded from analysis; thus, a total sample of 300 respondents completed the questionnaires and were included in the statistical analysis.

The demographic composition of the sample was as follows: 80.3% men and 19.7% women, between the ages of 19 and 58 (M = 30.60, SD = 6.41), with a mean of 9.81 (SD = 4.33) years of education. The majority of female participants (93.2%) were married or living with a partner, whereas among male participants only 31.5% were married or cohabiting. Respondents had been living in Israel for an average of nearly three years (M = 34.56 months, SD = 20.33), and most (87.8%) were employed on at least part-time basis. The majority of the sample had a temporary protection visa (83.6%), whereas the rest had been granted a more stable (albeit temporary) residence status. The sample is described in more detail elsewhere (Slonim-Nevo et al., 2015; Slonim-Nevo and Regev, 2016).

2.2. Measures

The instruments were initially chosen based on their wide use in previous studies with Darfuri refugees and asylum seekers (e.g., Nakash et al., 2013, 2017; Rasmussen et al., 2010). All scales were adapted and validated through a translation-back translation procedure together with focus group discussions and initial testing with the pilot sample. The final questionnaire was delivered in dual language format, with the Arabic text typed underneath the corresponding English phrase.

2.2.1. Trauma exposure

The Harvard Trauma Questionnaire (HTQ) is a widely used instrument that assess pre-migration traumatic events (Mollica et al., 1992). Respondents typically report for each item whether they have (1) personally experienced (2) witnessed (3) heard about or (4) none. To meet the objectives of this study, we replaced the original response format with the following four response categories: happened to me; happened to a family member; happened to a friend; heard about it (happening to other community members). Multiple answers were permitted and trauma items not endorsed at any level were left unmarked. Following feedback from the pilot sample and a focus group, the scale was

Table 1
Prevalence of traumatic events stratified by exposure proximity.

Traumatic event	*N*	Self		Family		Friends		Community	
		n	%	*n*	%	*n*	%	*n*	%
Torture	283	176	62.2	193	68.2	185	65.4	218	77.0
Imprisonment	279	160	57.3	157	56.3	177	63.4	207	74.2
Lack of food and water	280	178	63.6	156	55.7	133	47.5	186	66.4
Forced to hide	281	143	50.9	138	49.1	147	52.3	188	66.9
Physical assault	279	179	64.2	174	62.4	190	68.1	208	74.6
Assault with a weapon	276	157	56.9	163	59.1	165	59.8	202	73.2
Forced separation from family	281	178	63.3	149	53.0	156	55.5	183	65.1
Confiscation/destruction of personal property	281	232	82.6	210	74.7	196	69.8	197	70.1
Combat situation or exposure to war zone	281	199	70.8	204	72.6	197	70.1	213	75.8
Lack of shelter	284	220	77.5	201	70.8	198	69.7	197	69.4
Serious physical injury due to violence	271	51	18.8	127	46.9	155	57.2	204	75.3
Disappearance/kidnapping	271	49	18.1	103	38.0	128	50.9	207	76.4
Slavery or forced labor	276	169	61.2	157	56.9	173	62.7	209	75.7
Being raped	268	13	4.9	82	30.6	100	37.3	209	78.0
Sexual harassment	269	16	5.9	70	26.0	103	38.3	204	75.8
Thrown from a moving vehicle	263	32	12.2	66	25.1	115	43.7	209	79.5
Being shot by soldiers/Janjaweed	280	187	66.8	201	71.8	203	72.5	222	79.3
House being burned	280	201	71.8	205	73.2	190	67.9	211	75.4

Table 2
Cronbach's α, means, standard deviations and intercorrelations among traumatic exposure subscales.

Variable	Cronbach's α	Means	*SD*	1	2	3	4
Trauma-Self	0.82	8.99	3.85	—	0.24**	0.38**	0.13*
Trauma-Family	0.91	9.84	5.25		—	0.70**	0.53**
Trauma-Friends	0.92	10.47	5.60			—	0.75 **
Trauma-Others	0.95	13.14	5.88				—

Note. Composite subscale scores were obtained by summing the 18 relevant items; higher scores indicated more traumatic events.
* $p < .05$;
** $p < .001$.

amended to be more suitable to the Darfuri community, yielding a-21 item measure. Two items referring to "Serious injury, harm, or death you caused to someone else" and "Serious illness without access to medical care" were excluded due to a high rate of missing values caused by refusal (40.0% and 31.7%, respectively). The item 'Murder/ death due to violence' was also excluded from the subscales because it was not applicable for directly experienced trauma. The remaining 18 items were summed in each response category to yield four subscales of trauma exposure to Self, Family, Friends and Community members (See Table 1). The pilot sample showed a high one-month test-retest reliability for all four trauma subscales (rs = 0.89–0.96; all $ps < 0.001$). Similarly, the internal consistency for the main sample was satisfactory to high (Cronbach's α = 0.82–0.95; Table 2).

2.2.2. PTSD

PTSD symptoms were assessed using the PTSD Checklist–Civilian version (PCL-C; Weathers et al., 1994). This instrument has 17 items that correspond with the DSM-IV symptoms of PTSD (APA, 1994); each item is rated on a 5-point scale. All items were summed to a total severity score (of 17–85), with higher scores denoting greater levels of PTSD symptoms. In the current study, the internal consistency of the PTSD scale was high (α = 0.94).

2.2.3. Psychological distress

Depressive and anxiety symptoms were assessed using the depression and anxiety dimensions of the Brief Symptom Inventory (BSI; Derogatis and Melisaratos, 1983). Participants rate psychopathological symptoms and problems experienced in the past month across a 5-point scale. Higher scores reflect greater severity of stress. In this study, the depression and anxiety subscales attained good internal reliability (α = 0.81 and α = 0.83, respectively), and high test–retest reliability (r = 0.75 and r = 0.67, respectively, $ps < 0.001$).

2.2.4. Psychological well-being

Psychological well-being was assessed using the psychological domain of health-related quality of life from the World Health Organization Quality of Life: Brief Version (WHOQOL-BREF; WHOQOL, 1998). Items were rated on a 5-point scale, with domain scores ranging from 4 to 20. Higher scores represent better quality of life in terms of psychological functioning. The psychological health subscale had good internal consistency and test-retest reliability for the current study (α = 0.74; r = 0.46, $p < .05$) **Perceived Social support.** Perceived social support was assessed using a measure of 12-item Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988). Respondents rated on a 1–7 scale their degree of support from family, friends, and significant other. Higher scores indicated greater perceived social support. In the present study, the overall score was used with good internal consistency (α = 0.90) and test-retest reliability (r = 0.84, $p < .001$).

2.2.5. Demographic characteristics

Sociodemographic information collected included age, sex, years of education, marital status, employment, visa sa and length of stay in Israel.

2.3. Procedure

Each participant was informed of the voluntary nature of participation in the study and the confidentiality of their responses. Due to the sensitive nature of many questions, a self-report format was used and participants were offered to cross out any question they felt uncomfortable answering. Participants received a gift voucher of 100 Israeli Shekels (approximately $25). This research was approved by the ethics committee of the Social Work department at Ben-Gurion University of the Negev.

2.4. Data analysis

Statistical analyses were performed using SPSS 22.0 (IBM, USA). Bivariate correlations were used to examine associations among levels of trauma exposure (self, family, friends and community members) and sociodemographic and psychological variables. Further, four hierarchical regressions were carried out to control for the effects of

demographic variables and to test for the unique contribution of direct versus indirect trauma exposure in accounting for the variability in mental health outcomes (PTSD, depressive and anxiety symptoms) and psychological well-being. Additionally, for reasons that will become apparent in the Results section, perceived social support was also assessed and evaluated as a control variable in the regression analyses. Thus, in each regression analysis, control variables (sex, time in Israel and perceived social support) were entered in the first step; trauma factors were entered in the second step; and an interaction factor between direct and indirect trauma scales was entered in the third step. Missing data were handled via listwise deletion.

3. Results

Most of the participants (97.1%) reported at least one type of directly experienced trauma. The mean number of traumatic events was 8.99 (SD = 3.85) events for self-experienced subscale, 9.84 (SD = 5.25) for family subscale, 10.47 (SD = 5.60) for friends and 13.14 (SD = 5.88) for community members. The four subscales were positively and significantly inter-correlated (rs ranging from 0.13 to 0.75; Table 2).

Analysis of the specific trauma events by subscale are detailed in Table 1. The most common types of direct trauma exposure were confiscation/ destruction of personal property (n = 232; 82.6%) and lack of shelter (n = 220; 77.5%). High frequencies of occurrence were noted for all types of indirect trauma exposure with respect to community members, ranging from 65.1% (e.g. forced separation from family) to 79.5% (e.g. thrown from a moving vehicle).

Generally, respondents were more likely to report exposure to traumatic events in reference to close others than for themselves, and for distant others compared to family and friends. This was particularly evident for the two items describing sexual violence. For example, only 4.9% and 5.9% of the sample, respectively, reported that they had experienced rape or sexual harassment. In contrast, 30.6% and 26.0% of the sample, respectively, indicated they had a family member who experienced rape or sexual harassment. These numbers increase to 37.3% and 38.3% regarding rape or sexual harassment experienced by friends, and peaked to 78.0% and 75.8% in relation to distant community members. Even when restricting the analysis to female asylum seekers – as they are more likely than men to experience (or at least to report) being sexually assaulted (Nakash et al., 2015) – the patterns remained largely the same; thus, 15.9% and 21.7% of the women in our study reported being raped or sexually harassed, respectively, and these numbers increased with regard to their close and distant others experiencing rape (31.8%−52.3%) or sexual harassment (23.9%−47.8%).

Differences in prevalence rates on the four trauma scales were examined by sex and length of stay in Israel. Men reported significantly more traumas than women across all four trauma subscales (ps < 0.05; Table 3). Longer stay in Israel was not significantly associated with indirect exposure to trauma via close and distant others. However, there was a positive association between length of stay and direct trauma exposure (r = 0.23 p < .001), indicating that asylees who came to Israel at an earlier stage reported having experienced more traumatic events than recent arrivals. We, therefore, controlled for the influence of sex and length of stay in Israel in further analysis.

As expected, Trauma-self subscale which reflects directly experienced trauma showed a positive correlation with PTSD severity scores (r = 0.25, p < .001). Surprisingly, however, the three subscales reflecting of indirect trauma exposure had significant *negative* associations with PTSD scores (rs = −0.16 for Trauma-family and Trauma-friends subscales; and r = −0.33 for traumas experienced by community members; ps ≤ 0.01). Thus, greater indirect exposure to others' close traumatic events was associated with reduced PTSD symptoms. A similar pattern was found for depressive and anxiety symptoms, as all three subscales of indirect trauma exposure were significantly associated with lower levels of anxiety and depression (rs = 0.18 to −0.35; ps ≤ 0.003). Consistently, a reversed pattern was observed for indirect exposure to others' trauma and psychological well-being, with positive correlations ranging between 0.24 and 0.38 (ps < 0.001). Overall, whilst higher prevalence of direct trauma exposure was linked with worse levels of PTSD symptoms; greater indirect exposure to trauma experienced by close and distant others was linked with *fewer* symptoms of PTSD, depression and anxiety as well as *improved* psychological well-being.

It is plausible that people with extensive and/or strong social network may gain both more knowledge about others' trauma and greater access to stress-mitigating support. Thus, to rule out the possibility that social networks confound the observed associations between indirect trauma exposure and improved mental health, we examined whether trauma subscales were related to measures of network size (defined as the number of friends an individual has within the Darfuri community) and perceived social support (as measured by the MSPSS scale). Our results showed that network size was not significantly correlated with indirect exposure to traumatic events of family, friends and community members. Similarly, perceived social support was not associated with indirect trauma exposure via friends or community members, and only weakly correlated with greater exposure via family members (r = 0.14, p = .018). Thus, social connections and perceived social support do not seem to account for the positive associations between indirect exposure to trauma through others and improved mental health. Furthermore, perceived social support scores were not significantly correlated with PTSD symptoms, but were inversely associated with depressive (r = −0.127, p = .030) and anxiety (r = −0.125, p = .034) symptoms, and positively associated with well-being (r = 0.134, p = .023). Nevertheless, perceived social support, together with sex and length of stay, were included in the regression analyses to control for their potential confounding effects.

Next, we examined the differential capacity of direct versus indirect trauma exposure in statistically predicting mental health outcomes and psychological well-being. The three measures of exposure to others' traumatic experiences (i.e., family, friends and community members) were highly and positively inter-correlated with each other and had similar associations with the psychological outcomes. Therefore, these three subscales were averaged to form a single index of indirect trauma exposure through others (M = 11.20, SD = 4.96, α = 0.85). The results of the four hierarchical regressions are presented in Table 4. The interaction between direct and indirect trauma exposure was not

Table 3
Sex Differences on the traumatic exposure subscales.

Scale	Males (n = 229)		Females (n = 47)		t	df	Effect size
	Mean	*SD*	*Mean*	*SD*			
Trauma-Self	9.21	3.64	7.89	4.66	1.82*	58.01	0.35
Trauma-Family	10.08	5.30	8.68	4.85	1.67*	274	0.27
Trauma-Friends	11.18	5.38	6.98	5.35	4.88**	274	0.78
Trauma-Others	14.16	5.27	8.17	6.21	6.17**	60.35	1.10

Note: Hedges's g effect sizes are reported.

Table 4
Standardized regression coefficients from hierarchical regression analyses predicting psychological well-being and symptoms of PTSD, depression and anxiety.

	PTSD (n = 256)	Depression (n = 259)	Anxiety (n = 259)	Well-being (n = 258)
Step 1: R^2 =	**0.08*****	**0.05****	**0.10*****	**0.18*****
Sex	0.18**	0.17**	0.29***	−0.38***
Length of stay in months	0.22***	0.13*	0.10	−0.05
Social Support	−0.10	−0.15*	−0.23***	0.33***
Step 2: ΔR^2 =	**0.15*****	**0.08*****	**0.09*****	**0.07*****
Sex	0.14*	0.11	0.23***	−0.32***
Length of stay in months	0.13*	0.08	0.05	0.00
Social Support	−0.09	−0.13*	−0.21***	0.32***
Self-traumatic events	0.37***	0.21**	0.21***	−0.20***
Others' traumatic events	−0.31***	−0.28***	−0.30***	0.27***

* $p \leq .05$;
** $p \leq .01$;
*** $p \leq .001$; *Note.* PTSD = posttraumatic stress disorder.

significant and thus not included in the models.

In the PTSD model, at Step 1, the three control variables significantly accounted for 7.7% of the variance in PTSD symptoms, $F(3,252) = 6.99$, $p < .001$. At Step 2, the two trauma variables explained an additional 15.1% of the variance in PTSD symptoms, $F(5,250) = 14.74$, $p < .001$); direct trauma exposure was a significant direct predictor of PTSD symptoms ($\beta = 0.37$, $p < .001$), while indirect trauma exposure was a significant inverse predictor ($\beta = -0.31$, $p < .001$).

In the depression model, the control variables accounted for 5.1% of the variance in depression symptoms, $F(3,255) = 4.58$, $p = .004$; at Step 2, direct and indirect trauma exposure accounted for an additional 7.5% of the variance in depression symptoms $F(5,253) = 7.27$, $p < .001$. Again, both trauma factors were significant contributors: trauma directly experienced by the individual was positively related to scores on the depression scale ($\beta = 0.21$, $p = .002$); in contrast, exposure to trauma experienced by others was inversely related to depression scores ($\beta = -0.28$, $p < .001$).

In the anxiety model, the control variables significantly accounted for 10.4% of the variance in anxiety symptoms, $F(3,255) = 9.88$, $p < .001$. Introducing the two trauma variables explained an additional 8.6% of the variation in anxiety symptoms, and this change in R^2 was significant, $F(5,253) = 11.91$, $p < .001$. Direct trauma exposure significantly predicted higher levels of anxiety ($\beta = 0.21$, $p = .001$), whereas exposure to others' traumatic events significantly predicted lower levels of anxiety ($\beta = -0.30$, $p < .001$).

Finally, in the psychological well-being model, the control variables accounted for 18.0% of the variance in psychological well-being, $F(3,254) = 18.53$, $p < .001$. Adding the two trauma factors to the regression model explained an additional 7.3% of the variance in well-being, $F(5,252) = 17.06$, $p < .001$. Both trauma factors were significant predictors of psychological well-being: Trauma experienced by the individual was now inversely related to higher levels of psychological well-being ($\beta = -0.20$, $p = .001$), whereas trauma experienced by others was positively related to well-being ($\beta = 0.27$, $p < .001$).

4. Discussion

The aim of the present study was to explore different forms of exposure to war-related traumas and their associations with mental health among Darfuri asylum-seekers in Israel. In particular, we sought to test the independent contributions of direct trauma exposure through events experienced by the individual and indirect trauma exposure through events experienced by close and distant others to explaining variance in PTSD, depression and anxiety symptoms, and psychological well-being. Our findings reveal that both direct and indirect trauma exposure were significantly associated with mental health outcomes, but in opposing directions. As expected, trauma directly experienced by the individual was associated with poor mental health and lower psychological well-being. In contrast, indirect trauma exposure via close and distant others was associated with reduced emotional distress and higher psychological well-being.

These results indicate that measuring ones' exposure to others' traumatic events can provide unique and relevant information for understanding the well-being of traumatized refugees. Specifically, this study found that indirect trauma exposure is not associated with mental disorders – as it is for direct trauma exposure – but rather with better psychological adjustment. These results are in contrast to two previous reports documenting a positive association between trauma experienced by family and mental health symptoms (Nickerson et al., 2010; Schweitzer et al., 2006). However, these studies assessed family trauma history in the context of forced separation from relatives and fear for their safety. Thus, it could be argued that, in our study, indirect trauma exposure reflects the individual's knowledge of war events experienced by fellow refugees; this knowledge may have been gained through shared experiences, thereby acting as a communal coping resource (Badri et al., 2013; Betancourt et al., 2015; Savic et al., 2016).

One alternative explanation would be that individuals with larger or stronger social networks are more likely to know about traumas experienced by others around them; however, this account was ruled out by our findings. Another alternative explanation is that asylum-seekers who experienced more traumas than others (and consequently suffer from poorer mental health) would also tend to report fewer events with respect to others. This could be, for example, due to greater difficulty to endure other people's stories of their past hardships and suffering. However, our findings show that the subscale of direct trauma exposure was positively associated with the other three trauma subscales: Individuals reporting high prevalence of traumatic events on their part, also tended to report high prevalence of events in close and distant others. Thus, although direct and indirect trauma exposure measures were positively correlated with each other, the magnitude of the correlation was sufficiently low, and the two scales varied in the direction of their effect on psychological distress, suggesting that they are not measuring the same construct.

The mechanisms through which indirect exposure to war trauma through others is linked to increased well-being among traumatized refugees remain to be elucidated. In collective refugee groups, care support systems at the family and community-level are central to alleviating mental health problems (Chase and Sapkota, 2017). In this respect, communicating with relatives and community members about pre-migration life histories might serve as informal mutual care practice. Therefore, a possible explanation for our findings could be that sharing life histories enables the individual to meet collective cultural norms related to mutual caring (Badri et al., 2013; Chase and Sapkota, 2017), which then enhance the refugees' sense of communal identity and belonging that promote positive adaptation (Goodman, 2004).

Another (related) plausible explanation is that knowing about others' experiences provides validation for the individual's own experiences (Betancourt et al., 2015; Savic et al., 2016). Simich et al. (2003) found that resettled refugees actively seek to communicate about post-migration stressors with peers who have gone through similar resettlement experiences. The authors suggested that sharing post-migration experiences provides affirmational support that facilitate well-being, beyond instrumental and emotional types of social support (Simich et al., 2003). In a similar vein, it is possible that sharing pre-migration traumatic experiences provides affirmational support for traumatized refugees, which acts as a unique form of social capital promoting psychological well-being, independently of other sources of social support.

The findings may add to the long-standing debates over the inclusion of indirect trauma exposure as a diagnostic criteria for PTSD (Friedman et al., 2011) and the cross-cultural validity of Western

trauma and PTSD constructs (Jobson and O'kearney, 2008). The current study provides preliminary evidence suggesting that trauma exposure may be best conceptualized as stressors experienced directly by the individual, without the inclusion of traumatic events endured by significant others.

Finally, the present results are relevant to treatment and prevention interventions with refugees. Group therapy has been shown to buffer the impact of stress and improve psychological functioning among traumatized refugees (Akinsulure-Smith, 2009; 2012). Our findings are in accord with the view that the efficacy of group therapy for refugees can be ascribed to the group serving to provide a sense of family and community (Akinsulure-Smith, 2012). Our results suggest that in addition to providing a non-judgmental and supportive environment, the group might also serves an important role of validating and normalizing trauma-related experiences. Consistent with this interpretation, Akinsulure-Smith (2009, 2012) has noted that group members expressed feelings of relief upon learning that they were not alone in their pre-migration experiences and reactions.

Several study limitations should be noted. First, respondents were recruited via a combination of random and non-random sampling methods, which might have led to selection bias. However, our Darfuri interviewers made efforts to recruit participants with as diverse backgrounds as possible and no explicit refusals to participate were reported. The wide variability in age and time of arrival suggest a diverse sample. Second, this study was based on a sample of Darfuri asylum-seekers and findings may have limited generalizability to other refugee groups. In addition, the small number of women in our sample, though reflective of their proportion in the total population, precluded a more detailed analysis of possible sex differences in self and others' exposure to trauma and their effect on mental health. Another limitation of our study is that we did not ask respondents to specify whether they had personally witnessed the events endured by their friends and family. Future research could further examine the type of exposure individuals had to traumas endured by others. Another limitation is the reliance on self-report data that could be affected by memory biases. Finally, the correlational design of the study limits inferences about causal relationships. It may be that a personality trait is a cause of both knowledge of others' trauma and better psychological adjustment. Namely, individuals with greater knowledge of others' adverse experiences may be those who have better capabilities in coping with personal trauma as well as traumas experienced by others. Thus, knowledge of others' traumatic experiences might be an indicator of resilience.

In conclusion, this study revealed that while directly experienced trauma is associated with worse mental health outcomes in asylum-seekers, exposure to trauma experienced by other community members is associated with reduced psychological distress. Future longitudinal studies are needed to elucidate the causal pathways involved. If confirmed, our findings suggest that sharing traumatic experiences in a collective manner may be an effective approach in interventions to facilitate recovery from war trauma. This line of work would aid in optimizing culture-sensitive assessment and treatment of traumatized refugees.

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