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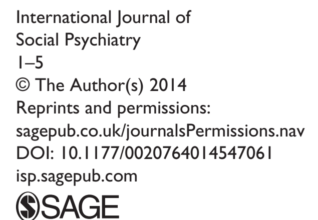

International Journal of
Social Psychiatry
1–5
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DOI: 10.1177/0020764014547061
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Psychiatric disorders among a sample of internally displaced persons in South Darfur

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Abstract

Background: The violent armed conflict in Darfur has been ongoing for years getting the attention of human rights activists and mental health professionals.

Aim: The aim of this study was to assess psychiatric disorders in a sample of internally displaced persons (IDPs) in South Darfur.

Method: A cross-sectional observational study, as a part of the 'Darfur Campaign' organized by Arab Federation of Psychiatrists, assessing psychiatric disorders in a sample of internally displaced women using the Structured Clinical Interview for DSM-IV (SCID-I) (clinical version).

Results: Up to 25.7% of participants had lost a close family member or more in the violent clashes. Psychiatric diagnoses were found in 62.2% of the participants. The most frequently reported was post-traumatic stress disorder (PTSD) reaching 14.9%, followed by depression 13.5% (among which 2.7% with psychotic features), while comorbid PTSD and depression reached 8.1% of participants. Patients with psychiatric diagnoses had an older age (36.6 years) ($p = .024$). Suffering from a psychiatric disorder was found to be associated with losing a family member in the conflict ($p = .015$), being 35.6% in patients with psychiatric diagnoses compared to 10.3% in those without losing a family member in the conflict (odds ratio (OR) = 4.7, 95% confidence interval (CI) = 1.25–18.28).

Conclusions: This study used a standardized tool for diagnosing psychiatric morbidity among refugees in Darfur to give as much as possible an actual description of the problems and psychiatric morbidity caused by human-made disasters. This study can help to lead to a more detailed and specific mental health service program much needed by this population.

Keywords

Post-traumatic stress disorder, depression, internally displaced persons, psychiatric disorders, mental health, Darfur

Introduction

The violent armed conflict in Darfur has been ongoing for several years since 2003 getting the attention of human rights activists and mental health professionals. Although there are documented decreased rates of mortality from violence since 2005, yet there was no improvement of the health condition and well being. There have been reports describing the living situation and human rights violation, and some of them were interested in the mental health aspects as well (Degomme & Guha-Sapir, 2010; Garfield & Polonsky, 2010).

The Arab Federation of Psychiatrists organized a campaign targeting the assessment of the psychiatric disorders in Darfur, providing professional help for the patients with psychiatric disorders at the time of the campaign (especially among internally displaced persons – IDPs), and training of mental health workers and volunteers to provide psychological first aid.

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Aim of the study

The aim of this study was to assess the presence of psychiatric disorders in a sample of IDPs in South Darfur.

Subjects and method

A cross-sectional observational study was done as a part of the 'Darfur Campaign' organized by Arab Federation of Psychiatrists Emergency and Disaster Unit, and conducted a research assessing psychiatric disorders in a sample of internally displaced women.

Two consultant psychiatrists were chosen to participate in a 4-day campaign. Two preparatory meetings were held and organized by the Arab Federation of Psychiatrists Emergency and Disaster Unit, the first to provide training on the tools used and to agree on the plan of action, and the second and final meeting was for assessment.

Site and procedures of the study

South Darfur is one of the three states that compose the region of Darfur in Western Sudan. It has an area of 127,300 km^2 and an estimated population of approximately 2,890,000 (2006). Nyala is the capital of the state. Nyala hosts nearly 40% of South Darfur's registered IDP population (267,450/701,872), including Kalma, the largest IDP camp in Darfur. The clinical work was done in a medical center Kalma Camp called (Centre Zero) established by United Nations International Children's Emergency Fund (UNICEF) in collaboration with Spanish Red Cross and Sudanese Red Crescent organizations.

A psychiatric clinic among the general medical and surgical clinics was found in Centre Zero but with no one to run the clinic. Although Nyala is the main city in South Darfur, there is only one psychiatrist that works in the whole city. There is great difficulty for the psychiatric patients in the camps to move into the city to meet the psychiatrist. The clinic was re-opened to serve psychiatric patients in Kalma Camp throughout the available working days of the campaign (4 days), none of the referred cases with psychiatric diagnoses were included, and they were only provided with appropriate and available psychiatric services. The site of recruitment of participants was the waiting area of the general medical and surgical clinics from the accompanying persons and relatives of the attendees to the clinics where 74 participants agreed to perform the interview and 16 refused. The participants were interviewed using Structured Clinical Interview for DSM-IV (SCID-I) (Arabic version) to assess the presence of Axis I diagnosis according to *Diagnostic and Statistical Manual of Mental Disorders* (4th ed., text rev.; DSM-IV TR).

We used the premises of the psychiatric clinic to perform the study procedures and to discuss and provide treatment afterwards when needed. There is no psychiatric facility for admitting patients. Psychiatric patients who need admission have to travel thousands of kilometers to Khartoum. Medications were prescribed, yet they were not available in the camp, and we were informed by the Sudanese Authorities that a list of different psychotropic medications was on its way from Al Khartoum.

Tools

SCID-I (clinical version). The Structured Clinical Interview for DSM-IV-TR axis I disorders (SCID-I) is a clinician-administered, semi-structured interview for use with psychiatric patients or with nonpatient community subjects who are undergoing evaluation for psychopathology (First, Spitzer, Williams, & Gibbon, 1996). The SCID-I was developed to provide coverage of psychiatric diagnosis according to DSM-IV. It was designed to be more efficient and simpler to use than other existing instruments and consequently to require less time for training and administration.

The study used the Arabic version of the SCID-I (El Missiry et al., 2004), with the help of the psychiatric nurse as many of the women did not properly speak and understand Formal Arabic and needed adaptation to colloquial Sudanese Arabic.

Ethical considerations

Ethical approval for this research was taken from the ethics committee of the Arab Federation of Psychiatrists as well as from the Sudanese Authorities in the region. An informed consent was also taken from all the participants in this study.

Statistical methods

Statistical analysis was performed using Statistical Package for Social Sciences, Version 17.0 (SPSS, Inc., Chicago, IL, USA) for Windows. Continuous variables were analyzed as mean values ± standard deviation (*SD*) or median (range) as appropriate. Rates and proportions were calculated for categorical data. For categorical variables, differences were analyzed with χ^2 (chi square) test and Fisher's exact test when appropriate. Differences among continuous variables with normal distribution were analyzed by Student's T-test. P-value of $<.05$ was considered statistically significant.

Results

The descriptive statistical analysis of the sample showed that the mean age of the participants was 32.6 ± 18.3 years, females represented the majority of the sample (89.2%), and the majority of participants were married (51.4%), while 31.1% were single and 17.6% were widowed. Nearly

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Table 1. Socio-demographics and loss of family members among IDPs in South Darfur.

Factor		Number	Percent
Age (years)	*M* ± *SD*	32.6 ± 18.3	
	Median (range)	27 (3–80)	
Gender	Male	8	10.8
	Female	66	89.2
	Single	23	31.1
Marital status	Married	38	51.4
	Widow	13	17.6
	Offspring	7	9.5
FM lost	Spouse	10	13.5
	Father	2	2.7
	None	55	74.3
Number of lost	One member	17	89.5
	Two members	2	10.5
Cooperation	Cooperative	71	95.9
	Noncooperative	3	4.1
Medical comorbidity	Present	15	20.3
	Epilepsy	14	93.3
	PN	1	6.7

IDPs: Internally Displaced Persons; FM: family member; *SD*: standard deviation, PN: Peripheral Neuropathy.

20% of the sample had a comorbid condition, and almost all of them suffered from epilepsy (Table 1).

Many participants had lost a close family member or more in the violent clashes reaching up to 25.7% of participants. Among which 13.5% lost their spouse, 9.5% lost an offspring, while 2.7% lost their father and 10.5% lost more than one family member during the conflict (Table 1).

Psychiatric diagnoses were found in 62.2% of the participants. The most frequently reported was post-traumatic stress disorder (PTSD) reaching 14.9%, followed by depression 13.5% (among which 2.7% with psychotic features), while comorbid PTSD and depression reached 8.1%, other comorbidities accounted for 4.1% of participants, somatization in 4.1%, then adjustment disorder in 2.7%, insomnia in 2.7%, alcoholism in 1.4% and separation anxiety in 1.4%. Other diagnoses included schizophrenia (4.1%), dementia (2.7%), delirium and mental retardation at the rate of 1.4% each (Table 2).

Patients with psychiatric diagnoses had an older age (36.6 years) compared to participants free from such illnesses (27.1 years) ($p = .024$). Suffering from a psychiatric disorder was found to be associated with losing a family member in the conflict, being 35.6% in patients with psychiatric diagnoses compared to 10.3% in those without losing a family member in the conflict ($p = .015$) with odds ratio (OR) of 4.7 (95% confidence interval (CI) = 1.25–18.28) (Table 3). On the other hand, the number of lost family members (one or two and more) had no statistically significant difference between the two groups.

Table 2. Frequency of psychiatric diagnoses among IDPs in South Darfur.

Diagnoses		Frequency	Percent
Depression and anxiety	Depression	8	10.8
	Depression with psychotic features	2	2.7
	PTSD	11	14.9
	Somatization	2	2.7
	Separation anxiety	1	1.4
	Adjustment	2	2.7
Psychosis	Schizophrenia	3	4.1
Others	Alcoholism	1	1.4
	Insomnia	2	2.7
	Delirium	1	1.4
	MR	1	1.4
	Dementia	2	2.7
Comorbid diagnoses	PTSD and depression	6	8.1
	Others	3	4.1
	Refused to talk about trauma	1	1.4
	Total	46	62.2
	Negative (no psychiatric morbidity)	28	37.8
Total		74	100.0

IDPs: internally displaced persons; PTSD: post-traumatic stress disorder; MR: mental retardation.

Gender, marital status, the number and relationship of the lost family member and the presence of comorbid conditions were not associated with the psychiatric disorders in this study.

Discussion

This study acknowledges the standardized diagnoses found in the refugee camp in South Darfur using SCID-I as a golden standard tool for establishing diagnoses. We found a high psychiatric morbidity among refugees in the Nayala Camp reaching 62.2% mainly suffering from PTSD (14.9%) and depression (13.5%) in addition to comorbidity of both in 8.1% of participants.

Higher rates of psychiatric morbidity were found in the study conducted by Musa and Hamid (2010) who found that 72% of participants had a psychiatric condition using the General Health Questionnaire (GHQ-28), together with much higher rates of PTSD reaching up to (54%). In another study by Kim, Torbay, and Lawry (2007), 31% received a diagnosis of major depressive disorder. We had low rates of epilepsy and schizophrenia in contrary with the work done by Souza, Yasuda, and Cristofani (2009) who found rates of epilepsy at 47% and psychosis at 31%.

Different rates are expected when different screening tools are used; in comparison to structured more specific tools like the SCID, another explanation is the different

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Table 3. Association between psychiatric diagnoses and socio-demographics and loss of family members among IDPs in South Darfur.

Factor	Psychiatric disorder		OR (95% CI)	*p*-value
	+ve	−ve		
	n = 45 (%)	*n* = 29 (%)		
Age (years)				
Mean ± *SD*	36.3 ± 19.7	27.1 ± 14.6	1.0 (0.94–1.04)	.024
Gender				
Female	41 (91.1)	25 (86.2)	1.6 (0.37–7.21)	.704
Male	4 (8.9)	4 (13.8)		
Marital status				
Single	11 (24.4)	12 (41.4)	1.0 (reference)	.094
Married	23 (51.1)	15 (51.7)	1.0 (0.25–4.12)	
Widow	11 (24.4)	2 (6.9)	0.5 (0.03–8.17)	
FM lost				
Offspring	7 (15.6)	0	NA	NA
Spouse	7 (15.6)	3 (10.3)		
Father	2 (4.4)	0		
None	29 (64.4)	26 (89.7)		
FM lost (2)				
None	29 (64.4)	26 (89.7)	4.7 (1.25–18.28)	.015
One or more member	16 (35.6)	3 (10.3)		
Medical comorbidity	7 (15.6)	8 (27.6)	0.5 (0.15–1.51)	.209
Cooperation				
Cooperative	44 (97.8)	27 (93.1)	3.2 (0.28–37.6)	.557
Noncooperative	1 (2.2)	2 (6.9)		

IDPs: internally displaced persons; +ve: had psychiatric disorder; −ve: no psychiatric disorders; *SD*: standard deviation; OR: odds ratio; CI: confidence interval; FM: family member.

time range of conducting the different studies in relation to the violent clashes and traumatic experiences. The differences in the daily living conditions in the camps is also an important factor to also take into consideration while interpreting the results of different surveys.

In another study, on similar populations, they found that 45% of refugees having psychiatric diagnoses of depression and/or PTSD exhibited the disorders in follow-up after 3 years according to DSM-IV criteria. Of those, 46% who rated high on disability scale continued to have disability. Trauma event was one of the factors associated with psychiatric disorders in Bosnian refugees (Mollica et al., 2001).

This study found that the age and death of a family member in the violent clashes in the region were associated with presence of psychiatric morbidity. On the other hand, the gender, marital status, number and type of lost family member and the presence of comorbid condition were not associated with the presence of psychiatric morbidity. Rasmussen and Annan (2010) came to the conclusion that traumatic events are the major contributor to the psychiatric disorders in refugees, but other studies also showed that daily living challenges in the camps life is another important determinant (Hamid & Musa, 2010).

In other studies with a special focus on PTSD in particular, Badri, Crutzen and Van den Borne (2012) investigated the effect of a wide range of traumatic experiences (combat situations, material loss, family loss and displacement) and the emergence of PTSD and its severity in a sample of Darfuri female college students and found that 80.9% met DSM-IV criteria for PTSD with a strong association between the experiential dimension of the trauma and the development of full picture of PTSD (Badri et al., 2012). In another recent study, it was revealed that 60% of Tuareg refugees in a refugee camp in Burkina Faso met the criteria for trauma- and stressor-related disorders which were higher in those with related events (death of a family member, severe problems with food and housing) (Carta et al., 2013).

This study used a standardized tool for diagnosing psychiatric morbidity among refugees in Darfur with the help of psychiatrists and humanitarian activists as well as governmental and nongovernmental efforts to give as much as possible an actual description of the problems and psychiatric morbidity caused by human-made disasters. We hope that this study can help to lead to a more detailed and specific mental health service program much needed by this population.

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Limitations

Although this work adds to the cumulative knowledge to the psychiatric morbidity among IDPs in areas of conflicts like Darfur, it has been limited by the sample selection, as we might have missed the spectrum of more severe cases with higher comorbidity that are not able to accompany another person to the clinics. In addition, it has been limited by the relatively smaller sample size. Another limitation was the lack of Sudanese colloquium in the used Arabic translation with the use of individual adaptation when needed.

Acknowledgements

The authors would like to acknowledge the help, support and guidance of the President of the Arab Federation of Psychiatrists Prof. Ahmed Okasha during the study and the chairperson of the Emergency and Disaster Section of the Arab Federation of Psychiatrists Prof. Wael Abou-Hindy.

Conflict of interest

The authors declare that there is no conflict of interest.

Funding

This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors.

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