ORIGINAL RESEARCH

Psychosocial Health in Displaced Iraqi Care-Seekers in Non-Governmental Organization Clinics in Amman, Jordan: An Unmet Need

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Keywords: care-seeking; clinic based sample; interval sampling method; Iraqi refugees; Jordan; mental health; psychosocial health

Abbreviations:
IASC = Inter-Agency Standing Committee of the United Nations Office for the Coordination of Humanitarian Affairs
NGO = non-governmental organization
PTSD = post-traumatic stress disorder

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Abstract

Introduction: Populations displaced by conflict face numerous threats to their psychological well-being; consequently, the prevalence of mental health problems, including anxiety, depression, and post-traumatic stress disorder can be elevated as compared to populations who have not experienced forced displacement.
Problem: Little is known about the mental health needs of displaced Iraqis. The factors associated with a need for psychological services among patients at seven clinics served by two NGOs that are known sources of care for the displaced Iraqi population in Amman, Jordan were explored.
Methods: The survey was conducted in January and February 2008 and included a random sample of care seekers from seven clinics selected using interval sampling. Interviews on the health needs of displaced Iraqis and their access to services, including mental health services lasting approximately 20 minutes were conducted.
Results: Of the 664 survey participants, 49% (95% CI = 45–53%) of respondents reported needing mental health services and 5% (95% CI = 3–8%) of those in need had access to services. The length of time spent in Jordan (adjusted OR = 1.08; 95% CI = 1.00–1.11) was associated with the need for mental health services and the adjusted odds of requiring psychological services was 39% less for individuals from outside of Baghdad as compared to Baghdad residents (OR = 0.61; 95% CI = 0.38–0.98). Responders citing violence as a factor were twice as likely to be from Baghdad (OR = 2.28; 95% CI = 1.03–6.91), while interviewees reporting displacement as a cause for needing mental health services were twice as likely to be female (OR = 2.14; 95% CI = 1.12–4.18). In individuals 35–44 years of age (OR = 0.36; 95% CI = 0.14–0.87) the need for mental health services due to displacement decreased by 64%, while being a part of a female-headed household decreased the need by 81% (OR = 0.19; 95% CI = 0.06–0.57%).
Conclusions: More attention should be given to expanding the local Jordanian health system capacity for the provision of mental service. Targeted social and psychiatric interventions that are culturally sensitive and aligned with Inter-Agency Standing Committee recommendations should be developed to compliment and expand the existing mental health service capacity in Jordan.

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Introduction

There is a growing awareness in the public health community of the need to provide services to displaced populations that go beyond the traditional minimal standards for humanitarian assistance during emergencies, such as access to food, shelter, water, sanitation, and primary health care.[1] In particular, mental health needs in conflict- and disaster-affected populations have been a recent focus of the international literature. During the aftermath of the Asian tsunami, the Inter-Agency Standing Committee (IASC) of the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) cre-

ated a task force in 2007 on Mental Health and Psychosocial Support in Emergency Settings. The World Health Organization and a non-governmental organization (NGO), InterAction, co-chaired this consortium.[2] Comprehensive, inter-sectoral guidelines on mental health and psychosocial support in emergency settings were launched in Geneva in 2007 by the IASC, and have been included in the newly revised Sphere Standards.[3]

Disasters caused by armed conflicts and natural hazards can result in physical harm, displacement, numerous disruptions to daily life, and exposure to traumatic events, all of which take a toll on the psychological well-being of the affected population. In particular, displaced populations often experience an increased risk of mental health disorders due to the inherent issues of conflict, including violent trauma, perpetually fearing for one's life, separation from family members, loss of family members due to violence, loss of wealth and property, scarcity of food and water, and unsanitary and transient living conditions.[4,5] A number of studies have reported a high prevalence of mental health disorders among refugees, particularly general anxiety disorder, major affective disorder, depression, and post-traumatic stress disorder (PTSD).[4–14] Using community samples in Algeria, Cambodia, Ethiopia, and Gaza, four developing countries that have been affected by conflict, the point prevalence of PTSD was shown to be 37.4%, 28.4%, 15.8%, and 17.8%, respectively.[15] In a random sample of African, European, and Asian refugees utilizing services at a Geneva primary care facility, the rate of major depressive disorder was 33%.[16] A study of Cambodian refugees two decades after their resettlement in the US indicated that their major depressive disorder rates were close to 50%.[8] Such high numbers suggest a need for comprehensive provision of mental health services for refugee populations.

Even after leaving areas of conflict, there can be significant stress associated with displacement that affects psychosocial well-being. This is particularly true when families are separated and where restrictions by the host government are common. For example, the inability to gain employment or secure housing within the host country, the inability to fulfill basic needs, dwindling financial resources, and insecure legal status are factors that contribute to increased uneasiness and stress among displaced Iraqis in host countries.[6] Among Iraqis immigrating to the US during the timeframes of pre-1980, 1980–1990, and post-1990, 8%, 17%, 28%, and 23% of the immigrants met the criteria for PTSD, anxiety, depression, or panic disorders, respectively.[17] The psychological and social impacts of emergencies may be acute in the short term, but they also can undermine the long-term mental health and psychosocial well-being of a displaced population.[15]

The current conflict in Iraq has resulted in a large displaced population. The United Nations High Commissioner for Refugees (UNHCR) estimates that >4.7 million Iraqis, approximately 20% of the population, have left their homes as a result of the conflict.[18] Of these, >2.7 million Iraqis are displaced internally, while >2 million have fled to neighboring states, with the largest concentrations going to Syria and Jordan.[18] Due to the urban nature of displacement, where the vast majority of displaced Iraqis are integrated within host country populations, ascertaining accurate population estimates has been difficult. In Jordan, the displaced Iraqi population has been between 450,000 and 750,000.[19] Despite this large number, little is known about their mental health needs or access to mental health services. However, the information gained from other displaced populations suggests that their needs may be substantial while their access to services is limited.[15]

Methods

The International Medical Corps and Johns Hopkins Bloomberg School of Public Health conducted a survey of Iraqis displaced in Amman, Jordan in January and February 2008. The aim of this study was to enhance understanding of the health needs and status, care-seeking behavior, access, and utilization of health services of displaced Iraqis arriving as patients at seven clinics operated by the Jordan Red Crescent Society (JRC) and Caritas, two NGOs. While this survey was not focused on mental health, questions regarding the need for psychological services, the reason for this need, and access to mental health services were included as sub-components of the study. Investigators composed questions to assess the needs for mental health services, initially piloted the questions in the clinics, modified them following focus-group type discussions with physician interviewers, then translated them into Arabic. The need for mental health services was self-reported by participants; no determination was made by interviewer judgment or clinician diagnosis. The survey was conducted when clinics were planning to expand psychosocial support services. Respondents reporting a need for mental health services were informed of the planned service expansion and also referred to public facilities. Unique identifiers were not collected which precluded follow-up to determine whether the care-seekers reporting need actually sought mental health care, treatment, or counseling.

Sample size calculations were based on a maximally conservative prevalence rate of 0.50, assuming 80% power ($1 - \beta$) and a significance level of $\alpha = 0.05$. The study was designed to detect statistically significant differences of ≥20% between clinics, with a minimum required sample size for each health facility of 47 respondents with 50 respondents per clinic as the planned minimum, and a total sample size of 800. The number of respondents sampled per clinic was allocated proportionally based on clinic usage data from the months preceding the survey, where clinics with larger patient volumes were allocated more interviews. Because of the varying quality and timeframes of clinic usage data, patient visits in some clinics were approximated by comparing to similarly sized clinics in other locations; this was the case for newer clinics, where historical usage data were not available. At the clinics, interval sampling was used to identify potential respondents where every n^{th} patient that checked into the clinic was selected; the specific interval varied by how busy the clinic was and the approximate duration of the average visit at that location.

The questionnaire was developed in English, translated into Arabic, and finalized with the assistance of the Iraqi interviewer team to ensure it was linguistically and culturally appropriate. The interview team was comprised of Iraqi physicians who received training on interview techniques

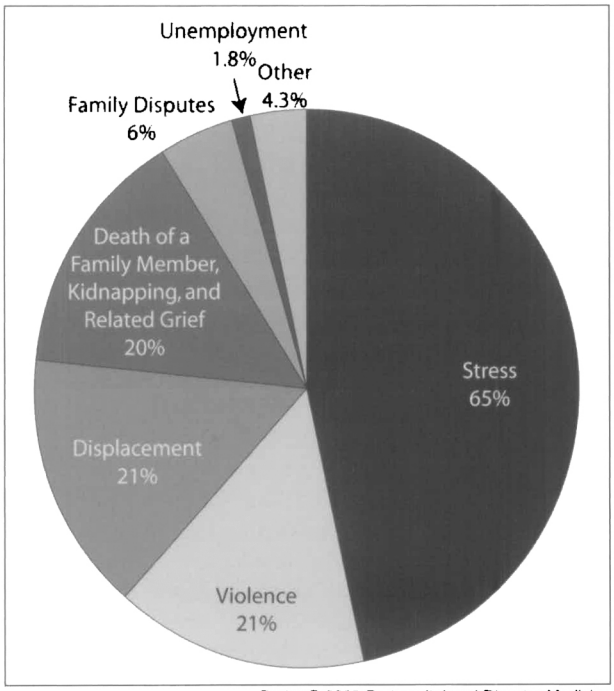

Figure 1—Self-reported reasons for needing psychological services

and the questionnaire prior to beginning the survey. Interviews were conducted upon the conclusion of the visit to the facility and lasted an average of 20–25 minutes. Efforts were made to conduct interviews in private locations to maintain confidentiality. All participants were informed of the voluntary nature of participation, that the interviewer was not affiliated with the clinic, and that the purpose of the survey was to improve and expand health services for Iraqis displaced in Jordan.

Data processing was conducted using the STATA 10.0 statistical package (College Station, TX). To ascertain associations between psychosocial needs and responder demographics, logistic regressions were performed. Selection of predictors was based on the likelihood ratio test and the lowest Aikaike's Information criterion values. Predictors were presented as odds ratios. Model fitting was conducted primarily using the Hosmer-Lemeshaw goodness of fit test.

The study was certified as exempt by the Johns Hopkins Bloomberg School of Public Health Committee on Human Research and approved by both NGOs with participating clinics.

Results

Despite variation in the non-response rates between clinics, the final sample was comparable to the planned sample. A total of 664 interviews, or 83% of the target sample were obtained, and the distribution of interviews across clinics was statistically similar to the planned allocation ($p = 0.790$). The proportion of respondents that declined to be interviewed was higher than anticipated (17%). Study interviewers reported the primary reason for non-response as lack of time; this concern was particularly prevalent in Amman clinics where patients often were referred to other facilities for diagnostics or medications. Additional reasons for declining interviews included frustration due to long waits for appointments; inability to be interviewed following dental appointments; and survey fatigue, where potential respondents already had participated in assessments of the Iraqi population.

Of the 664 respondents, 325 (49%; 95% CI = 45–53%) indicated a need for mental health services either for themselves or for a member of their household. Of those reporting a need for mental health services, only 5% (n = 15; 95% CI = 3–8%) indicated they had access to those services. The reasons for needing mental health services included violence, stress, displacement, death of a family member, family disputes, unemployment or poverty, or other. A graphic representation of the different self-reported reasons for needing mental health services is in Figure 1. Stress was the overwhelmingly dominant factor, followed by violence, displacement, death, kidnapping or unknown status of a family member and related grief.

Demographic characteristics among those reporting a need for mental health services and those reporting no need for mental health services are summarized in Table 1. A statistically significant difference was seen in the average time spent in Jordan between those who did and those who did not need mental health services. The average length of stay in Jordan was 3.8 ±3.5 years; however, this is reflective of a skewed distribution; the median length of stay was 2.5 years, with the largest number of arrivals in 2006. Those reporting a need for mental health services had an average length of stay in Jordan of 4.2 ±3.8 years, compared to an average length of 3.3 ±3.2 years for those who did not report need ($p = 0.001$). The year of arrival was associated with educational attainment; later arrivals had superior educational attainment than did those arriving before the current conflict ($p < 0.001$); no significant association between arrival year and respondent employment was observed ($p = 0.101$).

Among respondents from Baghdad, 46.7% (95% CI = 42.4–51.0%) needed mental health services as compared to 63.0% (95% CI = 53.6–72.5%) of Iraqis from other governorates ($p = 0.002$). The NGO where the respondents surveyed also was a significant predictor of need for psychological services (unadjusted OR = 0.64; 95% CI = 0.47–0.88). Statistically significant differences were observed in the need for mental health services between the various age groups; specifics on this finding are listed in Table 2 ($p = 0.007$). The need for psychological services and the causes for seeking these services also were examined in males of fighting age (15–45 years) in comparison to the rest of the respondents, but no statistically significant differences were found (results not shown). When stratified by gender, no statistically significant differences were observed in the need for mental health services among respondents for any covariate, including education or employment in the unadjusted model (results not shown). In the adjusted model, gender was only significantly associated with length of residence in Jordan. Females who had a need for mental health services had an average length of stay of 4.4 ±3.8 years compared to an average length of stay of 3.3 ±3.2 years for females who did not need mental health services ($p = 0.0015$).

Demographic characteristics varied significantly between populations seeking care at the two NGOs, Caritas and

	Total n (%)	Need Psychosocial Services n (%)	Do Not Need Psychosocial Services n (%)	*p*-value
Number	664	320	339	
Gender (n = 661)				
Male	255 (38.0)	122 (18.0)	133 (20.1)	0.598
Female	406 (61.0)	203 (30.7)	203 (30.7)	
Age (years; n = 664)				
<35	164 (25.0)	80 (12.0)	84 (12.7)	0.007*
35–44	165 (25.0)	76 (11.0)	89 (13.4)	
44–55	169 (25.0)	79 (12.0)	90 (13.5)	
55+	166 (25.0)	104 (16.0)	62 (9.3)	
Education Level Completed (n = 663)				
None	29 (4.3)	13 (1.9)	16 (2.4)	0.191
Primary	122 (18.4)	59 (8.9)	63 (9.5)	
Secondary	190 (28.6)	106 (16.0)	84 (12.7)	
Higher	322 (48.5)	147 (22.1)	175 (26.4)	
Employment (n = 658)				
Full-time	26 (4.0)	14 (2.1)	12 (1.8)	0.146
Part-time	43 (6.5)	18 (2.7)	25 (3.8)	
Unemployed	548 (83.2)	277 (42.0)	271 (41.2)	
Retired	41 (6.2)	14 (2.1)	27 (4.1)	
Nationality (n = 664)				
Iraq	626 (94.0)	311 (46.8)	315 (47.4)	0.167
Jordan	32 (4.8)	13 (2.0)	19 (2.9)	
Other	6 (0.9)	1 (0.2)	5 (0.8)	
Residence in Iraq (n = 619)				
Baghdad	516 (83.3)	241 (38.9)	275 (44.4)	0.002*
Outside of Baghdad	103 (16.6)	65 (10.5)	38 (6.1)	
Residence in Jordan (n = 623)				
Amman	515 (82.6)	253 (40.6)	262 (42.1)	0.407
Outside of Amman	108 (17.3)	58 (9.3)	50 (8.0)	
Length of Time in Jordan, mean years +SD				
NGO	3.77 ±3.51	4.23 ±3.78	3.31 ±3.16	0.001*
JRC	366 (55.0)	197 (29.8)	169 (25.6)	0.005*
Caritas	298 (44.8)	128 (19.3)	170 (25.7)	
Gender of Head of Household (n = 664)				
Male	559 (84.2)	272 (41.0)	287 (43.2)	0.757
Female	105 (15.8)	53 (8.0)	25 (7.8)	
Household Size (members; n = 662)				
>5	354 (53.5)	188 (28.0)	151 (23.0)	0.276
<5	309 (46.7)	166 (25.1)	158 (23.9)	
Married (n = 661)				
Yes	506 (76.4)	252 (38.1)	254 (38.4)	0.519
No	155 (23.4)	73 (11.9)	82 (12.4)	

Table 1—Respondent demographics on need for psychological services (% total respondents; JRC = Jordan Red Crescent; NGO = non-governmental organization) *statistically significant

JRC, and are summarized in Table 3. Stratification by NGO indicates that there is significant variation (p <0.001) in the average age of the respondents, the level of education completed, level of employment, prior residence in Iraq, current residence in Jordan, and the length of time in Jordan. Overall, 53.8% (95% CI = 48.7–59.0%) and 42.9% (95% CI = 37.3–48.6%) of patients at JRC and Caritas clinics respectively reported a need for mental health services (p = 0.005).

Using simple and multiple logistic regressions, odds ratios were calculated for the influence of various demo-

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Demographic	Crude OR	95% CI	*p*-value	Adjusted OR	95% CI	*p*-value
Gender						
Male	(reference)					
Female	1.09	0.81–1.49	0.589	1.18	0.81–1.72	0.385
Age (years)						
<35	(reference)					
35–44	1.15	0.72–1.71	0.621	1.00	0.61–1.63	0.993
44–55	1.08	0.70–1.66	0.710	0.99	0.60–1.60	0.959
55+	0.56*	0.37–0.88	0.015	0.62	0.37–1.03	0.069
Education						
None	(reference)					
Primary	1.15	0.51–2.60	0.272	1.06	0.37–1.03	0.896
Secondary	1.55	0.70–3.41	0.932	1.51	0.42–2.67	0.364
Higher	1.03	0.48–2.21	0.348	1.49	0.62–3.72	0.376
Employment						
Full-time	(reference)					
Part-time	0.62	0.23–1.64	0.335	0.73	0.26–2.05	0.555
Unemployed	0.87	0.39–1.92	0.743	1.20	0.52–2.83	0.663
Retired	0.44	0.16–1.21	0.114	0.97	0.32–2.92	0.960
Years in Jordan	1.08*	1.03–1.13	0.001	1.06*	1.00–1.11	0.040
Residence in Iraq						
Outside Baghdad	*(reference)*					
Inside Baghdad	0.51*	0.33–0.79	0.003	0.61*	0.38–0.98	0.043
Lives in Amman	0.83	0.55–1.26	0.387	0.87	0.55–1.35	0.519
NGO	0.64*	0.47–0.88	0.005	--	--	--
Household Size	1.02	0.95–1.10	0.276	0.99	0.69–1.39	0.941
Gender of Head of Household						
Male	(reference)					
Female	1.07	0.78–1.63	0.732	0.97	0.59–1.55	0.916
Married	0.97	0.88–1.07	0.520	0.97	0.88–1.03	0.317

Table 2—Odds ratios (ORs) of demographic factors versus need for psychological services (NGO = non-governmental organization) *p <0.05

graphic factors on the likelihood of needing mental health services. The odds ratios indicate statistically significant associations with various demographic factors and the need for mental health services (Table 3). At a significance level of alpha = 0.05, the unadjusted odds of needing psychological services for individuals ≥55 years of age was 44% less than for individuals <35 years of age (OR = 0.56; 95% CI = 0.37–0.89). The adjusted odds of requiring psychological services was 39% less for individuals who came from outside of Baghdad compared to those who migrated from inside Baghdad, (OR = 0.61; 95% CI = 0.38–0.98).

Multiple logistic regression was used to examine predictors for needing mental health services and odds ratios were calculated for the following causes: stress, violence, displacement, and death of a family member, kidnapping, unknown status, and related grief. Results of multivariate models are in Table 4. Stress was not significantly associated with any demographic factor except for the NGO visited, while exposure to violence was significantly associated with the individual's prior residence in Iraq (OR = 2.28; 95% CI = 1.03–6.96). Respondents reporting displacement as a cause for needing mental health services were twice as likely to be female (OR = 2.14; 95% CI = 1.12–4.18). Need for mental health services due to displacement among individuals 35–44 years of age (OR = 0.36; 95% CI = 0.14–0.87) was reduced by 64% when compared to Iraqis <35 years of age, while being a part of a female-headed household decreased the need by 81% (OR = 0.19; 95% CI = 0.06–0.57) (Table 4). Reporting a need for services due to the death of a family member decreased by 58% in married respondents (OR = 0.42; 95% CI = 0.20–0.86). Model fitting primarily was conducted with the Hosmer-Lemeshaw goodness of fit

	Total n (%)	JRC n (%)	Caritas n (%)	*p*-value
Number	661	366	295	
Gender (n = 661)				
Male	255 (38.0)	136 (20.6)	119 (18.0)	0.404
Female	406 (61.0)	230 (34.6)	176 (26.4)	
Age (years; n = 664)				
Average	44.3 ±13.8	42.1 ±13.0	47.0 ±14.1	<0.001
Education Level Completed (n = 663)				
None	29 (4.3)	18 (2.7)	11 (1.7)	<0.001
Primary	122 (18.4)	82 (12.4)	40 (6.0)	
Secondary	190 (28.6)	119 (17.9)	71 (10.7)	
Higher	322 (48.5)	146 (22.0)	176 (26.5)	
Employment (n = 658)				
Full-time	26 (4.0)	14 (2.1)	12 (1.8)	<0.001
Part-time	43 (6.5)	19 (2.9)	24 (3.7)	
Unemployed	548 (83.2)	277 (42.0)	271 (41.2)	
Retired	41 (6.2)	8 (1.2)	33 (5.0)	
Nationality (n = 664)				
Iraq	626 (94.0)	344 (51.8)	282 (42.5)	0.394
Jordan	32 (4.8)	20 (3.0)	121 (1.8)	
Other	6 (0.9)	2 (0.3)	4 (0.6)	
Residence in Iraq (n = 619)				
Baghdad	516 (83.3)	266 (42.9)	250 (40.4)	<0.001
Outside of Baghdad	103 (16.6)	72 (11.6)	31 (5.0)	
Residence in Jordan (n = 623)				
Amman	515 (82.6)	296 (47.5)	219 (35.2)	<0.001
Outside of Amman	108 (17.3)	47 (7.5)	61 (9.8)	
Length of Time in Jordan, years, mean ±SD	3.77 ±3.51	4.36 ±3.82	3.04 ±2.93	<0.001
Gender of Head of Household (n = 664)				
Male	559 (84.2)	306 (46.1)	253 (38.1)	0.650
Female	105 (15.8)	60 (9.0)	45 (6.7)	
Mean Household Size ±SD (members; n = 662)	4.53 ±2.15	4.66 ±2.23	4.40 ±2.07	0.130
Married (n = 661)				
Yes	506 (76.4)	282 (42.7)	224 (33.9)	0.536
No	155 (23.4)	82 (12.4)	73 (11.0)	

Table 3—Respondent demographics on mental health needs by non-governmental organization visited (% total respondents)

test that generally indicated adequate to good model fit. Model statistics were: for the psychological need versus respondent demographics, $p = 0.71$; for reasons for needing psychological services, stress, $p = 0.54$; violence, $p = 0.74$; displacement, $p = 0.53$; and death of a household member, $p = 0.75$.

Discussion

Nearly half of the displaced Iraqis surveyed reported a need for mental health services. Respondents reporting that stress, violence, displacement, and death of a family member were the precipitating reasons are consistent with other reports and circumstances of the setting from which the individuals were displaced.[17,20,21] This is consistent with previous reports of the need for such services among populations displaced by conflict. Noteworthy findings from the survey include the differences in need for mental health services based on length of residence in Jordan and the governorate of prior residence in Iraq.

The greater need for psychological services among populations who resided in Jordan for longer periods of time was unexpected. The need for psychosocial services was reported by 57% of respondents arriving prior to the 2003 US invasion, 78% of respondents arriving in 2003 (either before the invasion or in the ensuing nine and one-half months), and 48% of respondents arriving in 2004 or later. A national survey of Iraqis in Jordan found that 23% arrived before 2003 and 77% arrived in 2003 or later, with migration peaking in 2005 and 2006.[22] Generally, these patterns in migration mirror the trends in violence in Iraq. Violent mortality rates in Iraq increased annually from

Demographic	Adjusted OR due to stress	95% CI	Adjusted OR due to violence	95% CI	Adjusted OR due to displacement	95% CI	Adjusted OR due to death of a family members, kidnapping unknown status, related grief	95% CI
Gender								
Male	(reference)		(reference)		(reference)		(reference)	
Female	0.82	0.50–1.37	0.92	0.51–1.67	2.14*	1.12–4.18	0.97	0.49–1.91
Age								
<35	(reference)		(reference)		(reference)		(reference)	
35–44	0.87	0.45–1.71	1.61	0.72–3.61	0.36*	0.14–0.87	1.00	0.43–2.33
44–55	0.97	0.50–1.88	0.89	0.39–2.08	1.05	0.49–2.23	1.04	0.45–2.41
55+	0.95	0.43–2.10	0.77	0.28–2.02	0.95	0.4–2.23	1.94	0.77–4.90
Education								
None	(reference)		(reference)		(reference)		(reference)	
Primary	0.74	0.17–3.22	0.55	0.09–3.38	0.61	0.12–3.09	1.33	0.23–7.66
Secondary	0.57	0.14–2.3	0.72	0.13–3.97	0.51	0.10–2.45	1.92	0.36–10.29
Higher	0.56	0.14–2.28	0.77	0.14–4.17	0.63	0.13–2.99	1.85	0.35–9.82
Employment								
Full-time	(reference)		(reference)		(reference)		(reference)	
Part-time	0.73	0.17–4.70	0.88	0.17–4.67	1.22	0.21–7.00	2.88	0.44–18.58
Unemployed	1.10	0.33–3.70	0.47	0.12–1.80	0.38	0.09–1.61	1.50	0.30–7.54
Retired	0.89	0.17–4.70	2.28	0.37–14.04	0.69	0.11–4.60	0.34	0.02–4.79
Years in Jordan	1.05	0.97–1.12	0.93	0.85–1.02	0.89	0.81–0.98	0.97	0.89–1.06
Residence in Iraq								
Outside Baghdad	(reference)		(reference)		(reference)		(reference)	
Inside Baghdad	1.21	0.65–2.23	2.28*	1.03–6.91	1.07	0.96–1.19	0.58	0.28–1.21
Lives in Amman	0.83	0.43–1.57	2.12	0.87–5.17	0.51	0.25–1.05	1.11	0.51–2.48
NGO	1.03*	0.61–1.68	--	--	0.50	0.25–1.00	1.03	0.56–1.88
Household size								
>5 members	(reference)		(reference)		(reference)		(reference)	
<5 members	--	--	--	--	--	--	1.29	0.66–2.41
Gender of Head of Household								
Male	(reference)		(reference)		(reference)		(reference)	
Female	--	--	--	--	0.19*	0.06–0.57	1.97	0.85–4.63
Married	--	--	--	--	--	--	0.42*	0.20–0.86

Table 4—Odds ratios (ORs) for self-reported reasons for requiring mental health services *p <0.05

2003 to 2006, and 2006 generally was considered to have been the most violent year of the conflict.[23] Interestingly, the mental health need was lowest among the most recent arrivals who potentially were exposed to the most violence. Of those arriving in 2006 or 2007, only 43% reported needing mental health services, the lowest of any arrival timeframe. That longer residence time being associated with needs for greater mental health services was surprising: conventional thought might suggest that recent exposure to conflict and the difficulties associated with forced displacement would result in the greatest need for mental health services. Studies of other immigrant groups have noted delayed manifestation of depressive symptoms;[4] it also is possible that fluctuation in mental health needs over time is associated with beliefs that residence in Jordan is temporary, making the Iraqis less likely to immediately adapt to their new surroundings and creating long-term psychosocial problems.[19] Regardless of the reason, these findings indicate a need for the development of sustainable mental health and psychosocial services. The displacement of Iraqi populations throughout the region is not a problem that is likely to be resolved rapidly, and results from this study suggest that mental health needs among this population will increase further.

Also unexpected was the lack of an association between the respondent's educational level or employment status and the reported need for mental health services. Both factors relate to the ability of the head of the household to generate income and to provide basic necessities for the family, activities that affect mental state. In fact, studies have documented the consequences of unemployment, including emotional and social distress, psychological uneasiness, isolation, frustration, and anger leading to reduced self-esteem, increased domestic abuse, and elevated family violence due to the loss of traditional bread-winner roles.[19]

Less than 5% of those indicating a need for mental health services reported they had access to these services.

While this survey did not explore the reasons for this gap, all but a few of the clinics included in this survey offered mental health services. Anecdotally, most Iraqis receiving mental health services reported having private providers, so even though services were available at NGO clinics, only half of the Iraqis surveyed were aware of the services and referral services offered at the clinic. Even the Iraqis who had the opportunity to be referred to mental health services expressed discontent over the administrative and bureaucratic procedures they had to overcome in order to access services.[19] Little knowledge of where services were available was compounded by a shortage of mental health service providers, psychiatric facilities, a lack of training in counseling and psychology at the university and community level, and a centralization of mental health services in Amman.[19] Apart from limited access, additional barriers to care-seeking exist, most notably the stigma associated with mental illness and the high cost associated with private and public facilities.[2]

Utilization of pre-existing resources, such as social support networks, self-help groups, and women's groups as a mode of outreach also is a key element to be considered in the development and integration of mental health interventions.[2] Another important consideration involves screening, assessing, and treating candidates in a nested intervention format in which general mental health services are provided to the population-at-large, while specialized interventions are provided to individuals with more serious issues.[2] A focus on integrated approaches that include both broad and targeted interventions, and that build mental health service capacity in a coordinated approach in the non-profit and governmental sectors would be ideal. Keeping stand-alone treatment services (i.e., for rape or torture survivors), but broadening the scope of general medical services to include mental health care and training general medical practitioners, social workers, community health workers, and teachers in mental health care, such as psychological first aid and social interventions, would allow more individuals to be served, reduce social stigma, and provide greater sustainability, in accordance with the IASC standards.[2,10] The evidence supporting the integration of mental health care into the primary healthcare system has been documented with resettled refugees and in non-traumatized populations. For example, higher percentages of patients screening positive for depression sought treatment and adhered to treatment guidelines following the integration of services in a randomized, controlled trial conducted in clinics in the US.[10] The reduction of hospitalization and suicide rates in populations treated by Swedish general practitioners trained in the provision of mental health further demonstrates the advantages of this approach in developed countries.[24]

This study is not without its limitations. While definitions of mental health services were provided to respondents, there may be misclassification error due to different interpretations of mental health and the self-reporting nature of the responses, which were not based upon diagnosis or interviewer judgment. That only 83% of the patients asked to participate actually completed the survey could have resulted in selection bias, where those that agreed to participate are inherently different than those that declined. It may be difficult to generalize to the displaced Iraqi population in Jordan using results from a clinic-based sample that is asked at a household-level because care only is sought by a self-selected population sub-group. In retrospect, in the list of reasons for requiring psychological services, other risk factors may have been examined, including previous and current psychiatric history and past experience with torture. Studies in low-income countries affected by conflict reinforce the importance of examining pre-existing psychiatric illness as a predictor.[20] While the "other" category was designed to account for these responses from the respondents, it may have inadequately captured these reasons.[20]

Conclusions

Despite the international acknowledgement of the importance of mental health and the recent integration of mental health standards for emergencies into the IASC Standards, mental health remains a second tier intervention after the "urgent" needs of the population are met.[2] As such, resources devoted to mental health often are limited, especially in situations where available funds are limited and fall short of what is required for more comprehensive approaches to supporting population well-being. Results of this study draw attention to a lack of mental health and psychosocial services available to Iraqis displaced in Jordan. In spite of an unmet need for mental health services in nearly half of the respondents, only 5% had access to services. Clearly, conflict-affected populations that are exposed to overt violence, forced displacement, and economic and political instability are likely rendered vulnerable to mental health conditions. Results from this study suggest that need for mental health services increases with the length of displacement.

An increase in the size and scope of mental health and psychosocial support services for Iraqis displaced in Jordan is warranted to adequately support and provide comprehensive healthcare to this population. In developing mental health and psychosocial programs, interventions targeting the most at-risk subgroups should be prioritized. In this study, households from Baghdad and adults 35–44 years of age were likely to report needing mental health services; households reporting the death or unknown status of a family member also are a group that should be targeted. Programs that are designed to consider risk factors and predictors of mental health and draw upon the community's natural coping and resiliency mechanisms to reduce the level of psychological distress would be a strong initial approach to the expansion of mental health and psychosocial support services.[1] Implementation of these initiatives should be coordinated with the local Jordanian Ministry of Health to ensure they are appropriate and complementary to current national strategies and that they build mental health capacity within the infrastructure of the Jordanian health system.

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