Table 1 Web Appendix: Iraqi Refugees – Selected Characteristics and Summary of Studies Identified to Meet Systematic Review Criteria


### Search terminology used in systematic review for Iraqi Refugees

<table>
<thead>
<tr>
<th>Key Search Term</th>
<th>Content</th>
<th>Population</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key Search Term</td>
<td>Mental Health</td>
<td>Iraqi</td>
<td>Syria</td>
</tr>
<tr>
<td>Synonyms</td>
<td>Psychosocial Well-being*</td>
<td>Iraqis</td>
<td>Regional Locations</td>
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<tr>
<td></td>
<td>Emotional Well-being*</td>
<td>Iraqi refugee(s)</td>
<td>Jordan</td>
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<tr>
<td></td>
<td>Psychological</td>
<td>Iraqi asylum seeker</td>
<td>Lebanon</td>
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<td></td>
<td>Psychiatric</td>
<td>Iraqi (internally) displaced</td>
<td>Egypt</td>
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<td></td>
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<td></td>
<td>Turkey</td>
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<tr>
<td></td>
<td>Trauma</td>
<td></td>
<td>(Iraq)</td>
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<tr>
<td>Exclusions**</td>
<td>Distress</td>
<td>Veteran, soldier, deployment</td>
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</tr>
</tbody>
</table>

*Different spelling variations were used, e.g., psycho-social and psychosocial

** Based on a first test run exclusion terms were identified to tailor the search output

### The inclusion criteria for the review

1. The publication/study included Iraqi refugees in Syria or in refugee-hosting countries in the region (i.e., Jordan, Lebanon, Turkey, Egypt).
2. The publication/study provided data relevant to understanding the mental health status and profile of Iraqi refugees.
3. The article/document was published between 1997 and July 2013 in English or Arabic.
### Summary of main findings by study and location divided by published, grey literature and additional literature

(The results are clustered according to content of studies and guiding framework.)

<table>
<thead>
<tr>
<th>Study (Author/Year)</th>
<th>Population, Location, Time</th>
<th>Design</th>
<th>Main Findings about Mental Health Profile and Outcome</th>
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</thead>
<tbody>
<tr>
<td><strong>Iraqi Refugees published literature (database search)</strong></td>
<td></td>
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<tr>
<td>1</td>
<td>Tappis et al., 2012</td>
<td>Iraqi female refugees in Syria March 2009 (N=701 with 486 for final analysis) Cross-sectional survey with adult Iraqi females including health and well-being measures, domestic violence questionnaire, household questionnaire completed by oral interview, stratified 80x100 cluster sampling design</td>
<td>Domestic violence 30% respondents reported lifetime domestic violence, with physical 34%, verbal 56%, emotional abuse 20%. approx. 20% experienced abuse within the past year Risk factors for domestic violence: Non-Damascene resident, children under 18 in the household, borrowing money, experiences of violence in the past</td>
</tr>
<tr>
<td><strong>SYRIA &amp; JORDAN</strong></td>
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<tr>
<td>2</td>
<td>Cope, 2011</td>
<td>Iraqi refugees in Jordan and Syria Jordan: N= 1,200 households (5,440 individuals) UNICEF Syria: N = 813 households (3,923 individuals) ICMC Analysis of secondary data from UNICEF (2008) and the International Catholic Migration Commission (ICMC, 2009) assessments of the Iraqi population in Jordan and Syria; multistage cluster design, Jordan: 120 x 10 cluster survey design, 120 clusters split proportionally between the Amman and non-Amman Iraqi populations, Syria: 80 x 10 cluster survey design with the 80 clusters split proportionally between the Damascus and non-Damascus Iraqi population, questionnaire was first developed in Jordan using feedback from multiple stakeholders and then applied in Syria</td>
<td>Psychological outcome Jordan: Adults reported depressed mood: 16.67% (194 out of 1200) Syria: Adults reported depressed mood: 44.11% (352 out of 798) Psychosocial needs: 40.89% (330 out of 807) - Respondents reporting a need for psychosocial services in Syria were more likely to live in a larger household (shown through an association between increased stresses related to living in a larger household), particularly among heads of households - Household size overall showed little association with access to care Prevalence of physical or mental disability: 3% (Iraqis in Jordan), 7% (Iraqis in Syria)</td>
</tr>
<tr>
<td>3</td>
<td>Doocy et al., 2011</td>
<td>Iraqi refugees in Jordan and Syria Secondary data analysis of data obtained from UNICEF survey conducted in 2008. Multistage cluster surveys, Jordan: 120 x 10 cluster survey design,</td>
<td>Food security and food assistance: - Livelihood and food is significantly more expensive in Jordan than in Syria - A limited amount of people receive food assistance in Jordan (18%) as opposed to the majority receiving food assistance in Syria (90%)</td>
</tr>
</tbody>
</table>
| 4 | Doocy et al., 2013 | Iraqi refugees in Jordan and Syria | Nationally representative cross-sectional surveys of Iraqi populations displaced in Jordan and Syria – with health and disability focus (for details see above, numbers 2 and 3) Included Hopkins Symptom Checklist for one randomly selected adult of the household | Disability (physical and mental)  
- Overall disability rates were 7.1% (CI: 6.3–8.0) in Syria and significantly higher than 3.4% (CI: 3.0–3.9) in Jordan  
- In both countries, the majority of disability was attributed to conflict, prevalence was higher in men than women; the conflict-related disability rate in Syria was 1.6 (CI: 1.0–2.4) times greater than in Jordan possibly because of later arrival of the population  
- In Jordan, physical and mental disability rates were similar, whereas in Syria, mental disability occurred nearly twice as frequently as physical disability. Overall, men were more likely to be disabled than women in both Jordan (odds ratio (OR) = 1.3, CI: 1.0–1.8) and Syria (OR= 1.4, CI: 1.1–1.9). Odds of physical disability in Jordan and Syria, respectively, were 1.6 (CI: 1.0–2.8) and 2.7 (CI: 1.8–4.3) times greater among men than women.  
Mental disorders / symptoms  
- Depression was the leading cause of mental health disability  
- Depression accounted for 72% of mental disabilities in Jordan and 75% in Syria (p = 0.563); no significant difference was observed by sex in either location  
- When depressive symptoms were assessed in a random subsample of household members using a confidential questionnaire, women were more likely than men to have depressive symptoms in both Jordan (OR: 1.6, CI: 1.1–2.4) and Syria (OR: 2.5, CI: 1.8–3.5).  
- Sex-specific depressive symptom rates were significantly higher in Syria than in Jordan among men, at 37% and 12%, respectively, (OR: 4.3, CI: 3.0–6.2) and among women at 60% and 18%, respectively (OR: 6.6, CI: 4.8–9.2)  
Access to care  
- Majority of respondents in both countries perceived healthcare as unaffordable but accessible; cost was an important barrier to care | Jordan:  
N= 1,200 households (4,997 individuals)  
Syria:  
N= 813 households (3,684 individuals)  
ICMC  
Oct 2008 (Jordan) and March 2009 (Syria)  
120 clusters split proportionally between the Amman and non-Amman Iraqi populations, Syria: 80 x 10 (see above)  
Questionnaire was developed in Jordan with input from different agencies and stakeholders  
Questionnaire aimed to ask Iraqi refugees about general food security and living conditions, health status, access to health services, and receipt of humanitarian assistance such as cash assistance and food aid | - 71% of Iraqis in Syria sold their food rations, compared to only 41% of Iraqis in Jordan  
- Around 10% of the participants in Jordan and Syria went an entire day without eating a meal, and around 20% reported ever feeling hungry  
Cash assistance:  
- Living expenses are significantly higher in Jordan than they are in Syria  
- Cash assistance was limited both in Jordan and Syria 13.9% and 25.3% respectively  
In Jordan cash assistance was positively associated with, large number of individuals in household, low economic status, and registration with the UNHCR  
- In Syria cash assistance was associated with female headed households, UNHCR registration, residing in Damascus (close to UNHCR main office) and families with children |
**CQuosh et al. Table 1 Web Appendix: Iraqi Refugees – Selected characteristics and summary of studies identified to meet systematic review criteria**

<table>
<thead>
<tr>
<th>JORDAN</th>
<th>Iraqi Refugees</th>
<th>Research Design</th>
<th>Sample Characteristics</th>
<th>Findings</th>
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</thead>
<tbody>
<tr>
<td>5</td>
<td>Iraqi doctors arriving in Jordan after the invasion of 2003</td>
<td>Respondent-driven sampling, 3 seeds were used and chains were carried out to 10-11 waves of respondents; interviews in person or by phone</td>
<td>N = 401</td>
<td>Traumatic experiences of Iraqi doctors and reasons for their flight&lt;br&gt;- Flight from Iraq was associated with a violent event in 61% (CI: 56-65) of cases&lt;br&gt;- 75% (CI: 70-79) of doctor households experienced a violent event before migration&lt;br&gt;- 17% experienced kidnappings or assassination attempts (CI: 25-34);&lt;br&gt;- Male sex and older age were significantly associated with increased risk in multivariate models&lt;br&gt;- Only 30% (CI: 25-34) of doctors reported they have plan to return to Iraq when the conflict is over&lt;br&gt;- 6% (CI: 4-9) reported planning to return to Iraq within a year&lt;br&gt;- Majority, 52% (CI: 47-57) planned to settle in a third country</td>
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<tr>
<td>6</td>
<td>Iraqi refugees in Amman, Jordan (part of the results published before Doocy et al., 2008)</td>
<td>Survey and short interviews on the health needs, access to services, including sub-component on mental health services; Random sample of care seekers, interval sampling of patients in 7 health care clinics (of 2 NGO health providers) 61% female responders</td>
<td>N = 664</td>
<td>Psychological outcome / Need for MH services and PSS&lt;br&gt;- 49% (95% CI: 45-53%) reported needing mental health services for themselves or a member of the household&lt;br&gt;- Reasons for needing mental health services: stress (65%), violence (21%), displacement (21%), death of a family member, kidnapping or unknown status of family member and related grief (20%), family disputes (6%) and unemployment or poverty (1.8%)&lt;br&gt;- 5% (95% CI: 3-8%) of those in need had access to services&lt;br&gt;- 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&lt;br&gt;- 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)&lt;br&gt;- Responders citing violence as a factor were twice as likely to be from Baghdad (OR = 2.28; 95% CI = 1.03-6.91)&lt;br&gt;- 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)&lt;br&gt;- 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%&lt;br&gt;- Being a part of a female headed household decreased the need by 81% (OR = 0.19; 95% CI: 0.06-0.57%)&lt;br&gt;- 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&lt;br&gt;- Results suggest that mental health needs among this population will increase further&lt;br&gt;- 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 health and psychosocial well-being.</td>
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<tr>
<td>7</td>
<td>Iraqi refugees in Amman, Jordan</td>
<td>Survey designed and conducted by 36 Iraqi</td>
<td></td>
<td>Health outcome&lt;br&gt;- 59% of the interviewees reported physical health problems; most frequently mentioned</td>
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<tr>
<td>#</td>
<td>Reference</td>
<td>Description</td>
<td>Methodology</td>
<td>Measures</td>
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</table>
| 5 | July 2007 | Iraqi Refugees – Selected characteristics and summary of studies identified to meet systematic review criteria | Participants age 10-86, mixture of institution-based and 'snowball' sampling 53.7% female, 18.6% below 18 years | | were illnesses that are, among others, related to stress  
**Psychological outcome and perceived causes**  
- When asked about their physical ailments, 14% mentioned, primarily psychological problems such as anxiety, depression, and ‘going mad’  
- 78% of all respondents described psychological health problems further through perceived causes such as: financial problems (18.8%), bad physical health (15.2%), difficult living conditions (13.0%), loneliness (12.3%), instability (11.9%), no future (11.6%), lack of protection and residency, and fear of deportation (10.5%), no access to education (10.5%), no job (9.7%), being away from home (9.7%), traumatic experiences in Iraq (8.7%), and worries (8.7%)  
**Social concerns / support**  
- Neighbors and friends from Iraq were considered primary sources of information  
- 14.1% of the respondents indicated that they did not know of anyone who could help them get the necessary information and 25% did not know anybody to turn to for practical help, 23% would turn to relief organizations or to immediate and extended family  
- Members of the immediate family were primary emotional comfort resources for all respondents  
**Coping strategies**  
- Praying (49.7%) and reading the Qur’an or the Bible (42.1%) were the most preferred strategies of handling psychological distress and enhancing psychological wellbeing  
- Followed by talking to others (28.5%), going out (28.5%), sleeping (21.5%), taking medication, (14.1%), doing sports (11.9%), or doing nothing (10.2%)  
**Role of current perceived needs in explaining the association between past traumatic exposure and distress in humanitarian settings**  
- Current perceived needs were found to mediate the association between past traumatic exposure and distress in Jordan  
=> an integrated approach that includes a focus on daily stressors should be adopted to mitigate the impact of traumatic exposure in humanitarian settings  
**On self-reporting of personal health, 15.4% (24 out of 156) of homemakers reported neurological or psychological disorders and 16.7% (26) had non-specific complaints of general pain and weakness** |  
+ 354 refugees;  
+ Participants age 10-86, mixture of institution-based and 'snowball' sampling  
+ 53.7% female, 18.6% below 18 years |  
+ Series of mediator analyses, using data from Jordan (Iraqi refugees) and Nepal (Bhutanese refugees)  
+ Measured: The General Health Questionnaire (GHQ-12), the Humanitarian Emergency Settings Perceived Needs Scale (HESPER) and the traumatic events list of the Composite International Diagnostic Interview (CIDI) |  
8 | Jordans et al., 2012 | Iraqi refugees in Jordan (and Bhutanese refugees in Nepal) | Series of mediator analyses, using data from Jordan (Iraqi refugees) and Nepal (Bhutanese refugees)  
+ Measured: The General Health Questionnaire (GHQ-12), the Humanitarian Emergency Settings Perceived Needs Scale (HESPER) and the traumatic events list of the Composite International Diagnostic Interview (CIDI) |  
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9 | Khatib et al., 2010 | Iraqi refugee children and women in a camp at the Eastern border of Jordan in 2004  
N = 777  
(325 children, 452 women); 156 selected | Cross-sectional study with nutritional and health status focus  
Presented results based on 156 women selected for short interviews |  
+ On self-reporting of personal health, 15.4% (24 out of 156) of homemakers reported neurological or psychological disorders and 16.7% (26) had non-specific complaints of general pain and weakness |
<table>
<thead>
<tr>
<th>Study</th>
<th>Location</th>
<th>Methodology</th>
<th>Findings</th>
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</thead>
</table>
| 10 | Yanni et al., 2012 | Analysis of medical screening data with focus on Health Profile and Chronic Diseases Comorbidities | Mental health of Iraqi refugees to be resettled to the U.S.  
- 0.9% of screened US-bound Iraqi refugees were identified with neuro-developmental and mental disorders  
- 0.2% with mental retardation, 0.2% with epilepsy, 0.2% with post-traumatic stress disorder, less than 0.1% with mental disorders associated with harmful behavior, including schizophrenia, severe depression; 0.04% with autism, less than 0.1% with current drug or alcohol addiction; with addiction in remission; and (0.02%) with attention deficit hyperactivity disorder |
| 11 | Chynoweth, 2008 | Case studies and stories collected through interviewing 30 Iraqi individuals (women, men and young people) and 8 Iraqi families residing in Jordan, as well as 19 organisations working with refugees in Jordan discussing their reproductive health and services | Reproductive health and sexual violence among Iraqi refugees in Jordan  
- According to the interviewees sexual exploitation has increased since the beginning of the war and one local organization reported 15% of women seeking temporary marriages or sex work (in Iraq)  
- Rape survivors are discouraged from approaching services in Jordan due to social stigma and cultural norms. By law, doctors are obliged to report to the police any woman seeking medical care for rape incidents  
- There is one obstetric clinic that provides primary care for free. It is however far for many of the Iraqis and does not provide obstetric services for females unless they provide a marriage certificate. Not many Iraqis are aware these service exists.  
- UN agencies, international and local organizations do not prioritize reproductive health services  
- Sexual exploitation was reported by many Iraqis in Jordan (not quantified)  
- The Iraqi Aid Association for Chronic Patients, reported observed discrimination against patients who are HIV + (in Iraq)  
- As reported by the Iraqi participants, contraceptives are not distributed and pharmacists in Jordan would refuse to sell condoms to young and unmarried women and girls  
- Domestic violence was commonly reported by Iraqi women in Jordan and associated with traumatic experiences of war, current distress with providing for family, lack of employment, and current living conditions  
- Marital rape was also reported |
| 12 | LeRoch et al., 2010 | Analysis of collected participant data and outcomes for two different psychosocial programs for Iraqi refugees in Amman, Jordan and Beirut, Lebanon | “In between worlds” / traumatic experiences  
- The majority of refugees describes themselves as ‘living between two worlds.’ Having fled from the horrors and destruction of war and not yet having reached their dream destination, they remain on ‘standby.’  
- Many refugees, especially recent arrivals from Iraq, have experienced trauma such as witnessing the death, kidnapping or injury of friend or family, physical or sexual assault, and other traumas causing not only psychological distress, but also exacerbating existing mental health concerns and impacting coping ability |
**Psychological outcome, mental disorders / symptoms, services use**
Out of the 83 clients the majority suffered from emotional disorders (92.7%), followed by behavioral disorders (55.4%) and sleeping disorders (48.2%)
- Most prevalent self-reported symptoms to TdH psychologists were specific phobias, fears, nervousness and anxiety in adults and children
- Behavioral disorders such as aggressiveness and withdrawal were observed more in children
- Sleeping problems were represented mainly by repetitive and traumatic nightmares; frequent awakenings disturbed the parents, and children refused to sleep alone.
- Exile-related stressors have exacerbated distress, and as the years of asylum pass the condition of the majority of Iraqis is deteriorating
- Half of participants demonstrated a state of psychological distress for over one year
- In Jordan more women (55%) consulted the psychologists, with men representing 45% of the patients

**Social concerns / support, education**
- Social isolation, lack of social networks and difficult living conditions contribute to poor mental health
- Changes in family structure and unemployment cause fundamental role changes, resulting in a rise in domestic violence
- Many Iraqis would relate their problems to obvious social causes or physical health issues only
- While the two Iraqi refugee populations manifested similar psychosocial problems, the different contexts in Jordan and Lebanon required different approaches to psychosocial programs (Jordan: combination of psychosocial center-based services and community outreach / Lebanon: home and community-based services)
- Parents believe it is futile for their children to attend school…temporary…children remain enclosed in their parents’ resettlement dreams; the parents do not foresee their future in the asylum country
- Iraqis have become scapegoats for the misguided belief that they are responsible for burdening the already fragile general economy…threatened national identity…not facilitated integration… ‘multidimensional social alienation’ – in Jordan

**LEBANON**

| 13 | Bastin et al., 2013 | Urban refugees (including Iraqi refugees) with common and severe mental disorders at Médecins sans Frontières (MSF) run community mental health centre in Beirut, Lebanon | Measures for baseline assessment: the Global Assessment of Functioning (GAF) and the Self Reporting Questionnaire-20 items (SRQ 20) were used to evaluate treatment outcome in terms of functionality | Mean age was 39.2 years (28.5-46.5), 64.2% female |

**Psychological outcome**
The most frequent primary diagnoses were depressive disorders (28.8%), anxiety disorders (15.6%) and psychosis (11.5%).
A lower baseline SRQ20 score/higher baseline GAF score (indicators of severity), being diagnosed with anxiety (compared to being diagnosed with depression or psychosis) and a higher level of education were associated with better outcomes

Note: The data analysis was not separated by nationality.
<table>
<thead>
<tr>
<th>ID</th>
<th>Author</th>
<th>Year</th>
<th>Country</th>
<th>Methodology</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>Al Obaidi, 2009</td>
<td>Iraqi refugees in Egypt</td>
<td>June-Sept 2008</td>
<td>N=204</td>
<td>Self-designed checklist focusing on four groups of psychosocial stress factors; convenience sample, participants directly contacted in different neighborhoods, 47% females, 19% below 18 years</td>
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<tr>
<td>15</td>
<td>Shaarawi, 2012</td>
<td>Iraqi refugees in Egypt</td>
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<td></td>
<td>Mixed-methods approach, ethnographic field research including participant observation, person-centered interviews</td>
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**Traumatic experiences**
- More than 56% have experienced multiple traumatic situations before and during their flight
- Reported traumatic experiences:
  - 52.9% witnessed explosions
  - 49.1% were in the middle of an exchange of arms/weapons
  - 32.8% witnessed killing one or more of relatives
  - 30.8% witnessed corpses
  - 29.4% witnessed killing one or more of other people
  - 29.4% received direct death threat message
  - 12.2% exposed to torture or interrogation
  - 8.8% were kidnapped
  - 3.9% are injured or lost body part due to violence

**Psychological outcome and pre-existing conditions**
- Refugee respondents report major impacts on their health, mental health and socioeconomic situation
- 59% of the respondents indicated suffering from one or more psychological symptom, mostly anxiety or depressed mood
- Of those who reported psychological symptoms about half (51%) said these started in Iraq and about half (49%) said they started in Egypt
- Of those with preexisting psychological symptoms in Iraq most of them (71%) said the symptoms deteriorated while in Egypt
- The number of experienced traumatic events and the number of reported mental health symptoms were related (p<0.01)

**Social support**
- 71% of the respondents described a lack of social support

**Socio-economic**
- 78% were unemployed

**Outlook**
- 32% motivated to return home, 17% planned to stay in Egypt

**Socio-economic, social concerns and education**
- Majority of participants unemployed, face socio-economic difficulties and decline in living conditions, often causing anxiety regarding future
### Summer 2009

**Clients**
- Clients presenting at Cairo, Egypt NGO
- N = 110
- with refugees (n=110), interviews with service providers and archival research:
  - purposive sampling with focus on assessing ways in which refugees seek to mitigate the effects of displacement through interactions with institutions and policies
  - Family as a central aspect of life emphasized, family separation as a cause for suffering
  - Change in family dynamics, roles, disrupted relationships
  - Education often primary motivating factor in family decision making – disrupted education main concern
  - Lack of social support and lack of organized community activities

**Health, mental health and psychosocial well-being**
- Each interviewee reported an average of 1.5 health issues and 2.0 psychological problems, a few reported none (37% health, and 11% hala nufsi
- Interviewees articulated the connection between their mental health/psychosocial well-being (hala nufsi) and other aspects of health and well-being often noting that their psychological situation “made them sick” or exacerbated existing conditions
- Problems identified as being part of mental health were also sometimes described in medical and/or somatic terms, although emotions, such as tired (ta’aban), nervous, and angry as well as qualitative terms, such as bad or difficult, predominated
- Most commonly used adjectives to describe current state: “bad”, “difficult”, “not good”, “not comfortable” “tired”
- Most frequent concept: ta’aban, meaning tiredness or fatigue
- 16% of men and 10% of women reported either suffering from depression or being depressed
- 9 main categories of how psychosocial situation affects refugees: 1) anxiety; 2) sadness; 3) lack of comfort; 4) anger; 5) isolation; 6) sleep disruptions; 7) somatic presentation; 8) nervous breakdown; and 9) cognitive effects – in order of frequency
- Women (73%) in the sample were more likely than men (57%) to report health concerns, 93% of women identified some negative concern with their well-being compared to 82% of men
- The refugee situation in Egypt is conceptualized in terms of instability, an uncertain or insecure context in which one's life trajectory has been disrupted
- Instability is a main cause for mental health and psychosocial problems
- Seeking resettlement is one way to address this state, with implications for health and well-being that relate to experiences of war trauma and persecution, but are not directly attributable to them

### TURKEY

<table>
<thead>
<tr>
<th>16</th>
<th>Yaman et al., 2012</th>
<th>Refugees in Ankara, Turkey at a private family medical centre</th>
<th>Retrospective Analysis of medical records for age distribution, gender, origin, diagnoses, type of treatment and referral</th>
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</thead>
<tbody>
<tr>
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<td>September 1997 to March 1998</td>
<td>41% female, Ages ranged from 19 to 50 years</td>
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<td>N = 212 (from Iraq 64%, Iran 22%, Ethiopia 8%, Palestinian)</td>
<td>Mental health / disorders</td>
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<td>- 12% of the refugees treated at the clinic were identified with post-traumatic stress disorder</td>
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<td>- Women were more likely to be identified with PTSD</td>
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<td></td>
<td></td>
<td></td>
<td>- No other mental disorder or mental health condition was assessed in this study</td>
</tr>
</tbody>
</table>

Note: The data analysis was not separated by nationality.
<table>
<thead>
<tr>
<th>Study (Author/Year)</th>
<th>Population, Location, Time</th>
<th>Design Methodology</th>
<th>Main Findings about Mental Health Profile and Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Iraqi Refugees - Grey Literature</em></td>
<td><em>SYRIA</em></td>
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</tbody>
</table>
| 1 CDC/UNHCR 2007b | Iraqi refugees, 31 Oct - 25 Nov 2007, UNHCR Registration Center Damascus | Survey, 754 interviews, 15 interviewers, convenience sample drawn from families who registered or scheduled an appointment to register during the survey period, Instruments: Hopkins Checklist Depression Scale (HSCL-D), Harvard Trauma Questionnaire (HTQ) | Psychological outcome  
Estimated level of anxiety and depression symptoms above 80%  
- Many Iraqi refugees showed symptoms of depression (estimated at 89.5%) and anxiety (estimated at 81.6%) (n=384), with post-traumatic stress disorder symptoms at 67.6% (n=754).  
- These co-occur with severe medical conditions and are found to be prevalent in 20% of the registered population  
- Approximately 17% of Iraqi refugees have reported mental disabilities and 11% identified disabilities that are a result of torture  
Traumatic Experiences  
- Every survey respondent reported experiencing at least one traumatic event, as defined by the HTQ  
- 77% reported being affected by air bombardments and shelling or rocket attacks  
- 80% reported being witness to a shooting  
- 68% reported interrogation or harassment by militias or other groups with threats to life  
- 22% had been beaten by militias or other groups  
- 23% had been kidnapped,  
- 72% had been eye witnesses to a car bombing,  
- 75% knew someone close to them who had been killed or murdered  
- All reported events dated from 2003 to 2007 and took place in Iraq  
- 16% reported being tortured  
- 73% of household members alive and still in household, 22% living elsewhere, 4% dead, 1% missing  
- For those who died, 78% were murdered (62% of those by militia)  
- Of those alive and currently in Syria, 57% have received a direct threat, 53% have survived bombing, 11% have been assaulted, 6% have been kidnapped |
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| 1 | Socio-economic and basic needs | Main source of income:  
- 37% savings, 24% remittances, 24% salary, 12% pension  
- 41% did not reveal the source of their income |
|   |   |   |
| 2 | Health Sector Appeal, 2007 | Refers to Ministry of Health (MOH), UNICEF and WHO Rapid Assessment |
|   | Iraqi Refugees in Syria |   |
|   | July 2007 |   |
|   |   |   |
| 3 | SARC / DRC, 2007 (unpublished) | Rapid emergency needs assessment, qualitative  
Focus group discussions with 206 persons divided into groups with women, men, adolescents (male and female), children (male and female) in 8 SARC locations – Damascus and Rural Damascus and cities and town in the north and the northeast of Syria |
|   | Iraqi refugees in Syria |   |
|   | Aug - Sept 2007 | N = 206 |
|   |   |   |
|   |   | Psychological outcome and social concerns  
- Adults and adolescents appeared mentally exhausted, running out of resources  
- Shift in family structure and the loss of traditional roles occurring as a result of displacement, the inaccessibility of work and often education, contributes to stress within the families, leading to a rise in domestic violence among refugee households  
- Women concerned about not being able to provide for their children, reporting abuse of their children as a result of their stress level  
- Men frustrated at not being able to provide for their families  
- Children becoming increasingly aggressive towards each other, often cry without apparent reason  
- Adolescents (esp. females) seen as isolated, less supported and particularly vulnerable  
- Parents stated that their children are feeling lonely, homesick and having problems adapting to their new environment  
- Children have become increasingly aggressive towards each other and often cried without apparent reason |
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</table>

**CQuosh et al. Table 1 Web Appendix: Iraqi Refugees – Selected characteristics and summary of studies identified to meet systematic review criteria**

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</thead>
<tbody>
<tr>
<td><strong>UNHCR, 2008</strong></td>
<td><strong>UNHCR registered Iraqi refugees in Syria</strong></td>
<td>Analysis of registration data, identification of medical needs (including psychological) based on registration of 216, 370 refugees</td>
<td>19% of Iraqi refugees registered since 2007 are suffering from an serious medical condition such as chronic illnesses or psychological disorders</td>
</tr>
<tr>
<td><strong>Loughry et al., 2007</strong></td>
<td><strong>Iraqi refugees in Syria</strong></td>
<td>Assessment based on stakeholder interviews</td>
<td>Psychological outcome</td>
</tr>
<tr>
<td><strong>UNICEF, 2007</strong></td>
<td><strong>Iraqi adolescent girls in Damascus, Syria</strong></td>
<td>4 focus group discussions with Iraqi adolescent girls between the ages of 12 through 18, 1 with Palestinian adolescent girls</td>
<td>- High school drop-out and high interest to continue education</td>
</tr>
<tr>
<td><strong>UNICEF, 2008</strong></td>
<td><strong>Iraqi mothers in</strong></td>
<td>Focus-group discussions and survey with Iraqi mothers (N=22), four</td>
<td>- Parenting problems are related to financial problems, level of education of the mother, and the presence (increased tension) or absence (increased responsibility) of her spouse</td>
</tr>
</tbody>
</table>

**Reasons for doing so**

- Children and adolescents, especially female adolescents, spent most of their time at home watching TV and helping their parents
- Boredom, frustration and a lack of Iraqi social support structures was evident
- Focus group participants had a difficult time concentrating on issues psychosocial wellbeing; they were preoccupied by material and financial difficulties
- Adults expressed to “…have no control…extreme lack of confidence in their personal or collective ability to induce change or improve their situation”
- Those in border areas have a stronger social network and sense of support from both Iraqis and Syrians than do those in and around Damascus
- In Damascus / Rural Damascus, higher alienation and hopelessness, hopes for resettlement

**Psychological outcome**

- High levels of distress coupled with uncertainty about the future and concern not to be able to provide for the family impacting families and children
- Social service agencies in the church reported many significant and distressing incidences of families under enormous psychological stress
- Medical doctors reported that many clients reporting to outpatient clinics with physical complaints displayed signs of mental health problems
- A stakeholder described children as being anxious, experiencing some difficulty learning and being unable to play
- Teenagers are prevented from their life roles and become depressed, some severely
- Many adults exhibit severe anxiety and depression

**Iraqi Refugees**

- Loss of support network of friends and isolation
- Mobility restrictions
- Iraqi girls spend most of their time tending household chores with their mothers, and often live in cramped living quarters with other relatives in each bedroom
- Reported domestic violence
- Many Iraqi children work long hours to support their family, earning as little as an equivalent of 12 US$ a day
- Reports of exploitiation and abuse (e.g. delay or refusal to pay by employers, verbal and physical abuse)
- Reports of the rise in sex labour (many girls under 18)
- Based on available data, sex work of Iraqi refugees in Syria is divided into three types: sex labour on the individual level, on a family level, and on the level of organized networks
- Reports of girls being trafficked out of Iraq and sold to nightclubs and casinos as dancers, virgin brides, and prostitutes
<table>
<thead>
<tr>
<th></th>
<th>Damascus, Syria</th>
<th>consultation sessions with 40 mothers in Child Friendly Spaces (CFSs) in Damascus with random selection of respondents</th>
<th></th>
</tr>
</thead>
</table>
| 8 | WHO, 2010 (unpublished) | Iraqi refugees in Syria N=2,996 families | - Mothers reported experiencing high levels of stress and feelings of loneliness
- Lack of supportive social networks
- Many mothers admitted to taking out their frustration on their children by being irritable, shouting or hitting

Psychological outcome
Approximately 60% of the interviewed Iraqi refugees described feelings of sadness
50% described feelings of desperation, loneliness, and anxiety, as well as difficulties sleeping and the sense that everything requires more effort than usual

|   | Tsovili, Coutts & Quosh, 2010 (unpublished) | Quantitative data analysis of 2 datasets in June 2009 and January 2010 with psychosocial and child protection indicators collected by SARC volunteers in different child friendly spaces in Damascus, Syria Average age 10.4 years in database 1 and 9.1 in database 2, almost half are female | Children
- Half of the children and adolescents assessed reported high levels of past distressing experiences impacting social and psychological aspects of well-being and development even after a significant period of time
- Significantly more than half of the assessed children and adolescents displayed psychological symptoms
- Approximately half expressed social problems
- Approximately a third reported general health problems
- Psychosocial well-being impacted by interrelation between experiences of violence and conflict as well as socio-economic conditions in host country
- Exhaustion and lack of coping resources and adaptive mechanisms reported
- A trend is observed towards girls being more isolated and withdrawn, and boys more disruptive and aggressive in addition to elevated levels of fear, anger, sleeping difficulties and sadness

Dateset 1:
Past distressing experiences
55.8% of the children and adolescents were documented to have experienced potentially distressing events in the past (N=1497).
Following is a list of the reported distressing events:
26.4% Kidnapping,
10.2% Death in family,
9% Torture and
0.8% Rape

Psychological outcome
80.8% children and adolescents were identified to manifest at least one psychological difficulty or vulnerability. More than half of them were identified to express at least two psychological difficulties
The following is a list of the documented psychological difficulties:
48.3% Fear,
38.1% Anger,
24.2% Sleeping problems,
22.8% Change in manners,
21% Symptoms of depression
14.7% Enuresis or soiling and
13.7% Passivity
<table>
<thead>
<tr>
<th>#</th>
<th>Source/Study Description</th>
<th>Sample/Details</th>
<th>Findings/Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>UNHCR, 2008-2011 (unpublished)</td>
<td>Iraqi refugees in Damascus, Syria</td>
<td>Social concerns: 51% of the children and adolescents of dataset 1 were identified to manifest at least one social difficulty. 32.1% of the children and adolescents of this sample were categorized as having learning or concentration difficulties. Dataset 2: Most common psychological indicators were fear (54.6%), anger (48.8%), sleeping difficulties (24.6%) and depressed mood (20%).</td>
</tr>
<tr>
<td>11</td>
<td>Al Ammar, 2009/2010</td>
<td>Iraqi refugees in Damascus, Syria</td>
<td>Psychological outcome: Many refugees reported emotional problems that were related both to past experiences and present adjustment difficulties, including hyper-arousal (quickly angered and frightened), fatigue, hopelessness and that the current situation was exacerbating pre-existing mental health problems. Exacerbation of epileptic and non-epileptic seizures, increased somatisation. Social concerns: Social isolation and marginalization, Lack of social support, Family conflicts and violence, Lack of future opportunities, Disruption of family structure and roles, Sexual harassment and violence from within and outside the home, Lack of caretakers for vulnerable persons. Parents were concerned about education for their children, peer relationships and aggression among children, unstable family situations, stunted development, and child abuse.</td>
</tr>
<tr>
<td>12</td>
<td>UNHCR Survey, 2012</td>
<td>Refugees in Syria, Feb 2012, N= 804</td>
<td>Psychological outcome: Increased anxiety and fear. Refugee women report that tensions within households are increasing due to worsening financial circumstances and anxieties about the general situation in the country. More than 75% of the interviewed refugees stated that the current prevailing situation has had a negative impact on their mental or physical wellbeing.</td>
</tr>
<tr>
<td>13</td>
<td>Quosh, 2013</td>
<td>Registered Iraqi refugees in Syria</td>
<td>Survey with culturally-based assessment instrument: Preliminary analysis of a UNHCR assessment on psychosocial well-being, distress and functioning shows that the overall psychosocial well-being of the refugee population has been consistently low. The total mean of the respondents to a population assessment was 5.97 (on a 1-10 Likert scale, low number indicating low well-being). Clients assessed receiving mental health services and psychosocial support scored higher.</td>
</tr>
<tr>
<td>Study ID</td>
<td>Author</td>
<td>Year</td>
<td>Sample Description</td>
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</table>
| 14       | Unknown author | 2012 | Iraqi refugee children | Children 4-10 years, 1000 Iraqi refugee children in addition to Syrian children. Conducted surveys in schools, health centres and communities in Damascus in 2010 and 2011. Using translated and modified version of the SDQ (Strengths and Difficulties questionnaire) and childhood war trauma questionnaire, semi-structured interview with care-givers. | SDQ results: 
- Emotional: 
  - 0-3 normal: 23.7% (boys: 21.3%, girls 26.6%)
  - 4 borderline: 11.7% (boys: 9.8%, girls 14%)
  - 5-10 abnormal: 64.6% (boys: 68.9%, girls 59.3%)
- Conduct: abnormal range: 54.5%
- Hyperactivity: abnormal range: 42.6%
- Peer problems: abnormal range: 47.6%
Total abnormal range: 44.9%
Scores are in general above average (Iraqi children higher scores than Syrian children, whereas Syrian children score high compared to other studies in the region, many Iraqi children express clinical symptoms such as speech problems, enuresis). |
| 15       | AFSC, 2008 | 2008 | Iraqi refugees in Amman, Jordan and Damascus, Syria | Interviews with Iraqi refugees and stakeholders | Past traumatic experiences: 
- Many of the interviewed refugee families - especially those in Syria – reported experiences of severe violence.
- Most left Iraq because of the violence, after family members or friends had been killed, or after receiving direct threats.
- High degree of traumatization reported, with an observed blend of fear, anger, and hopelessness as well as resilience that enables survival. |
| 16       | CDC/UNH CR, 2007a | 2007a | Iraqi refugees in East Amman, Jordan participating in Community Development Center | Survey - Health assessment Adults (primarily Christians) 28% female | Health and education were the primary concerns of the interviewed families. 62% reported health problems. Health problems were reported to be associated with depression and trauma. Past traumatic experiences: 
- 22% reported having experienced a personal traumatic event. 
- 20% reported having been a survivor of torture. Psychological outcome: 
- 77% surveyed reported one or more psychological or emotional problems. The most common responses were: 
  - Anxiety and depression: 42%
  - Emotional pressure (stress): 22.4% (due to economic and social conditions)
  - Sadness and emotional instability: 20.3%
  - Fear and insecurity: 8.7%
  - Isolation: 6.6%
- Women reported more anxiety, depressed mood, emotional pressure, sadness and emotional instability. 
- Men reported more fear and a sense of insecurity. |
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<tr>
<th>No.</th>
<th>Source</th>
<th>Methodology</th>
<th>Sample Description</th>
<th>Findings</th>
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<tbody>
<tr>
<td>17</td>
<td>Jayawickrama &amp; Gilbert, 2008 (unpublished)</td>
<td>Qualitative assessment</td>
<td>Iraqi Refugees in Jordan</td>
<td>Psychological outcome and social concerns: - Both men and adolescents express feeling “not useful in society” - As long as the political situation remains as it is, no plans for the future can be made, thus anxiety, uncertainty, helplessness, and dependency on external agencies will continue - The role of religion is central to people’s lives and can be used within counseling to help with acceptance and adaptation - Men struggle with the loss of roles and internal pressure within families is compounded by severe overcrowding, fear of the police, loss of hope and frustration at the lack of possibilities for change, relation to domestic violence - Unrealistic hopes of resettlement prevent adjustment to the present</td>
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<tr>
<td>18</td>
<td>IOM, 2008</td>
<td>Rapid Appraisal Procedures approach-based assessment: 36 interviews with key informants, volunteer interviewers; 178 interviews with Iraqi families in Jordan (125) and Lebanon (53), 3 focus groups with 31 families in Lebanon, 1 with youth in Lebanon; - 166 Field observation (113 in Jordan, 53 in Lebanon) Using different questionnaires and tools</td>
<td>Iraqi refugee families in Lebanon and Jordan Nov 2007 – Jan 2008 N &gt; 209 households and 10 youth</td>
<td>Psychological outcome and social concerns: High levels of emotional and psychological distress, half of the interviewed sample disclosed manifestations of distress, including: panic attacks, anger, tiredness, sleep problems and fear (from observations based on distress indicators list, almost 50% of families in Jordan present 8 or more indicators and more than 50% of families in Lebanon) - Self-evaluated psychosocial uneasiness on a scale from 1 to 10: Jordan the mean is 7.5 and 7.8 in Lebanon - Particularly among Iraqis who have been displaced for two years or longer - ¼ of focus group participants reported domestic violence - Although children are often more resilient than adults, “behavioral and learning difficulties” are recognized, in part due to “stress in the family” - Women are taking on new responsibilities and challenges - Men are disempowered and disenfranchised of their role as protector and provider, reducing self-reliance - De-professionalization &amp; readapting social roles were cited as a main stressor by 33% - Minor labor/lack of schooling &amp; problems in school were reported - Discrimination and mistreatment from the host community - In Jordan and Lebanon not many spaces for socialization that are free of cost exist ➔ esp. important in the case of young men - Keeping bonds with Iraq (through ties with family and friends who are still there) is considered psychosocially important to respondents - Lack of occasions for socialization…inexistence of an organized social network, and general withdrawal…affecting in particular women and children - Modification, re-adaptation, and painful loss of family and social roles - In Jordan, some teenagers use narratives of war and martyrdom</td>
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<td>No.</td>
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<td>Methodology</td>
<td>Findings</td>
<td>Notes</td>
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<td>19</td>
<td>IOM 2005-2006</td>
<td>IDPs in Iraq&lt;br&gt;N = 113&lt;br&gt;IDPs and host families were conducted in 6 governorates, 55 field observations</td>
<td>Depression, frustration, stress, fears for security and humiliation, widespread feelings among Iraqi population&lt;br&gt;The main fears are related to the lack of security, the specific condition of IDPs and the lack of juridical and administrative status or a final political resolution about their situation&lt;br&gt;Reasons of their psychosocial needs:&lt;br&gt;- Insecurity&lt;br&gt;- Lack of justice and of state control&lt;br&gt;- Unemployment&lt;br&gt;- Lack of basic services, and&lt;br&gt;- The instability of the situation&lt;br&gt;- Lack of social recreational life, stress related to unemployment, shortage of basic services and food, also resulting in despair and family violence&lt;br&gt;- Many children do not go to schools and are not given alternative safe environments for personal growth; parents are concerned about disrupted education of their children&lt;br&gt;- There is an increase in family separation, due to economic constraints&lt;br&gt;- Most IDPs are, according to the Hertz scale, facing a rebound phase&lt;br&gt;- Most returnees, with the exclusion of Baghdad, are in between the rebound and coping phases&lt;br&gt;- Secondary displaced present a very variable status, where indicators of impact rebound and coping phases often coexist&lt;br&gt;- Political divisions among sects and consequent discrimination are considered a main cause of distress for a small percentage of the interviewees&lt;br&gt;- A large percentage (almost half) of the IDPs interviewed, think that the relation with the host community is non-existent or very negative&lt;br&gt;- Loss of social and family roles and the necessity to reaffirm it may be at the basis of the increase in violent communication within families</td>
<td>- 50% of Iraqis displaced in Jordan reported to be in-need of psychosocial support but are unlikely to search for treatment because of cultural stigmatization, lack or difficulty in accessing appropriate services (in Jordan, lack of services / in Lebanon, services are private and too expensive)&lt;br&gt;- Women, in particular, show a tendency not to share emotional suffering within the family, for cultural and gender-related issue&lt;br&gt;- Most families in Jordan are assumed to be in phase 2, and most in Lebanon to be between phase 1 &amp; 2</td>
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<tr>
<td>20</td>
<td>Refugee International&lt;br&gt;Alhasnawi, WHO, IMHS 2009</td>
<td>Interviews with Iraqi refugee families in Northern Iraq as well as with community center workers</td>
<td>Sexual violence&lt;br&gt;In both the Kurdistan Regional Government (KRG) and Syria, extreme financial pressures on displaced families are resulting in increased reports of forced early marriages, &quot;temporary marriages&quot; (muta), sex labour, and trafficking of women and girls&lt;br&gt;- Increased domestic violence&lt;br&gt;- Displaced women in KRG have difficulties accessing already weak gynecological, preventive and mental health services&lt;br&gt;- Increased school drop-out in Syria</td>
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</table>
CQuosh et al. Table 1 Web Appendix: Iraqi Refugees – Selected characteristics and summary of studies identified to meet systematic review criteria

<table>
<thead>
<tr>
<th>Year</th>
<th>Study Details</th>
<th>Findings</th>
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</table>
| 2006 and 2007 | N = 4,332 household residents by trained lay interviewers, the WHO Composite International Diagnostic interview (CIDI) was used to assess DSM-IV disorders | - Anxiety disorders were the most common class of disorders (13.8%) and major depressive disorder (MDD) the most common disorder (7.2%)
- Twelve-month prevalence of any disorder was 13.6%, with 42.1% of cases classified mild, 36.0% moderate, and 21.9% serious
- The disorders most often classified serious were bipolar disorder (76.9%) and substance-related disorders (54.9%)
- Socio-demographic correlates were generally consistent with international epidemiological surveys, with the two exceptions of no significant gender differences in mood disorders and positive correlations of anxiety and mood disorders with education
- Only 2.2% of IMHS respondents reported receiving treatment for emotional problems in the 12 months before interview, including 23.7% of those with serious, 9.2% with moderate, and 5.3% with mild disorders and 0.9% of other respondents |
Table 2 Web Appendix: Syrian IDPs and Refugees –
Selected Characteristics and Summary of Studies Identified to Meet Systematic Review Criteria


Search terminology used in systematic review for Syrian internally displaced persons (IDPs) and refugees

<table>
<thead>
<tr>
<th>Key Search Term</th>
<th>Content</th>
<th>Population</th>
<th>Location</th>
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<tbody>
<tr>
<td>Mental Health</td>
<td>Syrian</td>
<td>Syria</td>
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<tr>
<td>Psychosocial Well-being*</td>
<td>Syrians</td>
<td>Regional Locations</td>
<td></td>
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<tr>
<td>Emotional Well-being*</td>
<td>Syrian Refugee(s)</td>
<td>Jordan</td>
<td></td>
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<tr>
<td>Psychosocial*</td>
<td>Syrian asylum seeker</td>
<td>Lebanon</td>
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<tr>
<td>Social</td>
<td>Syrian (internally) displaced</td>
<td>Turkey</td>
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<tr>
<td>Psychological</td>
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<td>Iraq</td>
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<td>Psychiatric</td>
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<td>Egypt</td>
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<td>Trauma</td>
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<td>Distress</td>
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Exclusions**

*Different spelling variations were used, e.g., psycho-social and psychosocial
** Based on a first test run exclusion terms were identified to tailor the search output

The inclusion criteria for the review

The inclusion criteria for this review were:

1) The publication/study included Syrian baseline data, internally displaced persons in Syria or Syrian refugees in refugee-hosting countries in the region (i.e., Jordan, Lebanon, Turkey, Iraq, Egypt).
2) The publication/study provided data relevant to understanding the mental health status and profile of internally displaced Syrians and Syrian refugees.
3) The article/document was published between 1997 and July 2013 in English or Arabic.
### Summary of main findings by study and location, divided by grey literature and additional literature

(The results are clustered according to content of studies and guiding framework.)

<table>
<thead>
<tr>
<th>Study (Author/Year)</th>
<th>Population, Location, Time</th>
<th>Design Methodology</th>
<th>Main Findings about Mental Health Profile and Outcome</th>
</tr>
</thead>
</table>
| Syrian IDP and Refugees - Grey Literature | Syrian internally displaced September 2012 N= 14 | Qualitative stakeholder assessment among 14 MHPSS Working Group members | **Basic Needs**  
60% mentioned lack of basic needs impacting mental health and well-being, in order of priority: 
1. Safety and Security  
2. Housing / Shelter  
3. Food  
   Economic problems (incl. unemployment, poverty)  
4. Health  
**Psychological outcome**  
1. Fear, anxiety  
2. Grief, mourning, bereavement  
3. Depressed mood and loss of trust  
4. Isolation, increased distress, aggressiveness and anger  
5. Loss of control, inability to accept circumstances  
**Social concerns and support**  
1. Separated and scattered families  
2. Lack of social support, social relations  
3. Change in gender roles, lack of activities  
**Children:** Development and attachment problems  
**Resources**  
- Adaptation, acceptance, community outreach & support, new social networks, involvement in planning, activated charities, NGOs & volunteerism  
**Key concern**  
- Increased family and sexual violence  

Populations that are of primary concern were identified as persons who have been internally displaced (particularly those displaced several times), who have experienced severe violence and multiple losses, SGBV survivors, persons with mental disorders, children, separated families, female headed households, and host families.
<table>
<thead>
<tr>
<th>No.</th>
<th>Source</th>
<th>Region/Population</th>
<th>Methodology</th>
<th>Key Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>UNHCR/ SARC, 2013</td>
<td>Syrian internally displaced January 2013</td>
<td>Qualitative stakeholder assessment with psychiatrists, psychologists, master trainers, and psychosocial community volunteers</td>
<td>Stakeholders covered the areas of Damascus, rural Damascus, Homs and Aleppo, but could not provide detailed updates on the profiles of other governorates. Priority concerns of displaced populations/basic needs:  - Lack of security  - Sudden forced displacement  - Lack/destruction of shelter, access to basic services and livelihood  - Lack/destruction of or no access to schools and educational institutions  - High unemployment, increased poverty and severe socio-economic problems Psychological outcome:  - Difficulties adapting to the situation and dealing with multiple losses, grief and mourning  - Hopelessness and loss of trust  - Continuous fear and anxiety  - Disruption of social relationships, disintegration of family and social structures (Maladaptive) coping mechanisms:  - Increase in gender-based violence, child abuse, violence against the elderly  - Increase in number of early marriages  - Increase in child labor Community resources and adaptive coping mechanisms:  - Activated community networks, community support, youth engagement  - Active community leaders  - Religious coping Priority concerns for frontline workers and volunteers:  - Increase in burnout symptoms, symptoms of depression and anxiety, grief and mourning.</td>
</tr>
<tr>
<td>3</td>
<td>SARC, 2012</td>
<td>Syrian internally displaced Mid-2012</td>
<td>Qualitative assessment by SARC volunteers in schools and collective shelters working with children in Damascus and rural Damascus</td>
<td>The following trends among children were described: Mental Health Outcome and Trends among Children:  - Increased sadness and fatigue  - Loss of interest, pessimistic outlook and passiveness  - Increased fears and anxiety  - Increased withdrawal and attachment to parents  -Sleeping difficulties (incl. nightmares), bedwetting  - Reduced levels of concentration, comprehension and understanding  - Increased headaches  - Increased aggression  - Increased violence among peers and within families  - Difficulties for parents in dealing with their children Volunteers reported being severely affected by their work, including experiencing anxiety and depression symptoms, somatic complaints, anger, grief, and mourning.</td>
</tr>
<tr>
<td>4</td>
<td>J-RANS II, 2013</td>
<td>Syrian internally displaced and affected population in northeastern governorates</td>
<td>(Second) rapid multi-sector assessment with questionnaire and key informant interviews, reached 69% of the sub-districts of 7 northern governorates, representing an estimated 84% of the total population living in the area before the conflict started.</td>
<td>Child protection, well-being concerns and injuries:  - Serious child protection concerns for tens of thousands of children have been reported, including: killing and maiming; sexual violence; torture; arbitrary detention; recruitment and use of children by armed forces; exposure to explosive remnants of war; and growing intolerance  - More than 11,000 children under the age of 18 years were reported to be injured in the areas assessed in J-RANS II with the highest number of injured reported in Aleppo and Idlib Signs of distress are a common and widespread concern.</td>
</tr>
<tr>
<td>May 2013</td>
<td>104 out of the total of 150 sub-districts in 29 districts of 7 Governorates (Hama, Idleb, Aleppo, Lattakia, Ar-Raqqa, Al-Hassakeh and Deir-ez-Zor)</td>
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<tr>
<td>May 2013</td>
<td>When asked how their children are coping with their experiences, most parents reply that the war has left children with a pervading and persistent feeling of fear</td>
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<td>May 2013</td>
<td>Parents also reported that their children are showing signs of significant emotional distress, such as nightmares, bed-wetting, or becoming uncharacteristically aggressive or withdrawn; any loud noise reminds the children of the violence they fled from</td>
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<td>May 2013</td>
<td>Children with disabilities, chronic diseases or from single parent families are particularly vulnerable and do not have equal access to services</td>
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<tr>
<td>May 2013</td>
<td>In Al Karameh IDP camp in Idleb, children are showing obvious signs of distress and are exposed to maltreatment and neglect from parents who themselves are showing high levels of distress and are unable to cope with their own difficulties</td>
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<tr>
<td>May 2013</td>
<td>Same signs were reported by children in other camps and host communities in Idleb Governorate</td>
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</table>

Psychological outcome:
- “Frustration” (including anxiety, psychological stress etc.) was rated as a high protection concern, “violence against civilians and psychological trauma” were priority issues in all assessed areas of Aleppo City
  - Frustration was mentioned as a priority concern in 20 of the 106 assessed sub-districts however without further specification by key informants. In 4 of the 20 sub-districts, the recruitment of children into armed forces was mentioned as a priority concern in addition to frustration concerns. Other secondary concerns included violence against civilians (2 sub-districts in Deir-ez-Zor and Aleppo), family separation (2 sub-districts in Lattakia and Al-Hassakeh) and hazardous child labour (3 sub-districts in Aleppo). It is however unclear to which extent these protection concerns are correlated.

Social concerns and support
Communal tensions were attributed to assistance being insufficient to meet the needs of all those affected.

Most vulnerable and affected groups
- Destitute families
- Female-headed households
- Older person headed households
- Households with persons with a disability

Education
- Approx. 89% Syrian children attended primary school in rural areas in 2006; even lower rates for poorer north-eastern regions as well as for secondary school attendance
- In the northern governorates, now only 43% of the schools were reported to be functional and used for educational activities
- The data collected in J-RANS II indicates however a great disparity in these governorates depending on the intensity of conflict; on average 49% of the children attend school in low conflict intensity areas

5 UNICEF, 2013 | Syrian children | Remote qualitative assessment |
| 5 UNICEF, 2013 | Identified serious child protection concerns for tens of thousands of children, including: killing and maiming; sexual violence; torture; arbitrary detention; recruitment and use of children by armed forces; exposure to explosive remnants of war; and growing intolerance (see above) |
| 5 UNICEF, 2013 | Children’s exposure to extreme violence is causing serious psychological distress and impacting school performance |
| 5 UNICEF, 2013 | Many children have been unable to attend school for the past 2 years |
| JORDAN | Syrian refugees in host communities in Jordan, January 2012 | MHPSS information gathering exercises, qualitative assessment with focus group discussions, key informant interviews and individual interviews using tools 8 and 11 from the World Health Organization (WHO) MHPSS Assessment Toolkit | N = 353 average age 37 years 28% female | General problems: camp conditions, worry and fear about family members back in Syria and about their properties, as well as about the current situation in the camp, aggressiveness and psychological distress due to the camp conditions, respiratory problems due to dust in the camp, shock (related to traumatic events in Syria), worry, financial and housing problems 45% respondents felt intense fear all or most of the time 38% reported increased levels of worry, fear, psychological distress as well as aggressiveness and boredom among the interviewed refugees - The most frequently cited coping methods were praying, smoking and socializing with friends and family. | - The assessment in host communities in Mafraq, Ramtha and, Irbid highlighted increased levels of fear, worry and grief, anger, boredom and psychological distress among the refugees 45% respondents felt intense fear all or most of the time 50% felt worried the whole time. - The most frequently cited coping methods were praying, smoking and socializing with friends and family. |}

<p>| LEBANON | Syrians refugees at the northern Lebanese-Syrian border, May-June, 2011 | Qualitative assessment in the region of Wadi Khaled, using a free-listing tool 11 from the World Health Organization (WHO) MHPSS Assessment Toolkit | N = 100 64 % female | - Reported general problems in order of frequency: lethargy, fear of insecurity, anxiety, worry about family, lack of necessities, changes in children’s behaviors, financial problems, sleeping difficulties, loneliness, loss of appetite, discomfort at host home, feeling empty, bodily aches - The most frequently reported mental health problems were anxiety, feeling depressed, lethargy, eating and sleeping problems, anger and fatigue - Anger, fear, anxiety, feeling depressed and stress affect relationships within families and daily functioning and health - Anxiety leads to feeling hostile and hopelessness to feeling guilty - Inability of following up daily tasks as well as isolation were mentioned - Mothers described changes in the behaviors of their children, which caused them to react negatively with them thus creating an atmosphere of negativity with the children and within the family itself - Mothers expressed an inability to show affection towards their children, feeding into their feelings of isolation, alienation, and negative relationships - Positive coping mechanisms: exercising, going out, and playing with one’s children. - Negative coping mechanisms: smoking, watching TV [specifically the news and worrying about the ones. | - Reported general problems in order of frequency: lethargy, fear of insecurity, anxiety, worry about family, lack of necessities, changes in children’s behaviors, financial problems, sleeping difficulties, loneliness, loss of appetite, discomfort at host home, feeling empty, bodily aches - The most frequently reported mental health problems were anxiety, feeling depressed, lethargy, eating and sleeping problems, anger and fatigue - Anger, fear, anxiety, feeling depressed and stress affect relationships within families and daily functioning and health - Anxiety leads to feeling hostile and hopelessness to feeling guilty - Inability of following up daily tasks as well as isolation were mentioned - Mothers described changes in the behaviors of their children, which caused them to react negatively with them thus creating an atmosphere of negativity with the children and within the family itself - Mothers expressed an inability to show affection towards their children, feeding into their feelings of isolation, alienation, and negative relationships - Positive coping mechanisms: exercising, going out, and playing with one’s children. - Negative coping mechanisms: smoking, watching TV [specifically the news and worrying about the ones. |</p>
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<thead>
<tr>
<th>No.</th>
<th>Source</th>
<th>Study Details</th>
<th>Sample</th>
<th>Methodology</th>
<th>Findings</th>
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</thead>
</table>
| 9   | MDM (Pérez-Sales), 2013 | Syrian refugees in Bekaa Valley, Lebanon | N = 154 | Semi-structured individual interviews, Cluster sampling and latin square method, 66% female | - Well-being is greatly attributed to fulfilling basic needs with the following priorities: 1) income and future, 2) shelter, and 3) food  
- Most people experience overwhelming emotions of fear, anger, fatigue, or hopelessness  
- Feelings of humiliation and frustration with dependency on aid were prevalent as well  
- Negative emotions seemed to increase over time  
- Among the refugee community a lack of unity, community organization, support, trust and confidence was reported as well as increased frustration and anger  
- Gender-based violence as well as experiencing torture were reported among men and women  
- Praying is a main coping strategy and the community asked for financial support, employment, assistance, shelter, education, and activities for children and adolescents |
| 10  | Mobayad (2013, in preparation) | Syrian refugees in 2 camps | N = 228 adults, N = 129 children | Random sample study of Syrian men and women between 18 and 65 and children from 10-16 years in 2 camps | Psychological outcome  
- prevalence rates of PTSD from 36.3% to 61.9% among adults  
- main predictors were exposure to fighting and hostility, history of trauma  
- prevalence rates of PTSD from 41.3% to 76.49% among children  
- main predictors were number of traumatic experiences related to conflict |
| 11  | MSF, 2012 | Syrian refugees in Lebanon | N = 889 (survey), 83 (records) | Cross-sectional survey in three regions of Lebanon - structured questionnaire, 55.4% female (survey) | - 5 main problems reported are rental costs, housing quality, lack of employment opportunities leading to dependency on external assistance, poor quality water, and lack of money.  
- The high cost of living, low availability of drugs, and psychological stress were concerns  
- Many women, men, children report psychological problems, more prevalent in Wadi Khaled (based on survey results)  
Out of 83 patients consulted by mental health team (based on mental health records)  
- Depression represented 50% of cases and anxiety accounted for 25%  
- Some patients reported having been tortured and raped  
Children:  
- High levels of distress |
| 12  | Bahcesehir Study, 2013 | Syrian children in Islahiye camp in Southern Turkey | N=311 | Primarily quantitative survey with different measurements including the Stressful Life Events Questionnaire, the Social Provisions Scale, the Children’s Depression Inventory, the Children’s Revised Impact of Events Scale | - Children display different levels functioning and adaptation  
- Three out of four Syrian children have lost a loved one in the fighting  
- More than 60% experienced events where they felt their lives were in danger  
- 50% had been exposed to 6 or more traumatic  
- However, 71% of the girls and 61% of the boys had strong close relationships to trusted persons for help and support  
- 30% reported that they had been separated from their families  
- Around 60% of the children reported symptoms of depression (significantly higher among girls)  
- 45% reported symptoms of PTSD  
- 22% aggression  
- 65% psychosomatic symptoms to a degree that seriously reduces the children’s level of functioning |
<table>
<thead>
<tr>
<th>Study (Author/Year)</th>
<th>Population, Location, Time</th>
<th>Design</th>
<th>Methodology</th>
<th>Main Findings about Mental Health Profile and Outcome</th>
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</thead>
<tbody>
<tr>
<td>Kilzieh et al., 2008</td>
<td>Syrians in Aleppo, N = 2038</td>
<td>Cross-sectional, population-based study in Aleppo on adults aged 18-65 utilizing a structured interview questionnaire</td>
<td>mean age 35.3 55% female</td>
<td>- In women, predictors of depression were heart disease (OR = 3.95, 95% CI: 1.50-10.40), hypertension (OR = 2.92, 95% CI: 1.53-5.55), and kidney disease (OR = 2.96, 95% CI: 1.64-5.32) - Depression comorbidity with any chronic disease decreased in higher socio-economic status (middle vs. low: OR = 0.28, 95% CI: 0.12-0.65; high vs. low: OR = 0.20, 95% CI: 0.05-0.81) - In men, predictors of depression were rheumatism (OR = 7.10, 95% CI: 2.58-19.60) and respiratory disease (OR = 3.77, 95% CI: 1.23-11.60) - Depression comorbidity decreased in residence in formal zones (OR = 0.22, 95% CI: 0.06-0.80)</td>
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<td>Kilzieh et al., 2010</td>
<td>Syrians in Aleppo, N = 2038</td>
<td>Cross-sectional, population-based study in Aleppo on adults aged 18-65 utilizing a structured interview questionnaire</td>
<td>mean age 35.3 55% female</td>
<td>- 4.5% of the respondents had depression - Female gender, low socioeconomic status (SES), and depression were associated with high physical impairment - Women had more impairment (OR = 3.35, 95% CI: 2.15-5.21) with little change after controlling for depression and chronic diseases, but significantly decreased after controlling for socio-demographics (OR = 1.51, 95% CI: 0.84-2.73) - The association with low (vs. high) SES was prominent (OR = 2.48, 95% CI: 1.32-4.67) after controlling for all variables - Depression's association (OR = 4.85, 95% CI: 1.93-12.15) lost significance after controlling for chronic diseases (OR = 2.81, 95% CI: 0.96-8.25), but further adjustment for socio-demographics had little effect</td>
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<td>Maziak et al.</td>
<td>Low-income</td>
<td>Sample recruited from</td>
<td>- Current physical abuse (battering at least 3 times during the previous year) was found in 23% of the</td>
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<td>al. et al., 2003</td>
<td>women in Aleppo, Syria</td>
<td>8 randomly selected primary care centers in Aleppo</td>
<td>investigated and among 26% of married women, while regular abuse (battering at least once weekly) was found in 3.3% of married women. Correlates of physical abuse were women's education, religion, age, marital status, economic status, mental distress, smoking, and residence.</td>
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<tr>
<td>Maziak et al., 2002</td>
<td>Low-income women in Aleppo, Syria</td>
<td>Sample recruited from 8 randomly selected primary care centers in Aleppo</td>
<td>The prevalence of psychiatric distress was 55.6%. Predictors of women's mental health in the logistic regression analysis were: physical abuse, women's education, polygamy, residence, age and age of marriage. Among these predictors, women's illiteracy, polygamy and physical abuse were the strongest determinants of mental distress leading to the worse outcomes.</td>
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<td>Maziak, W. et al., 2005</td>
<td>Syrians in Aleppo</td>
<td>Household survey with randomly selected sample using stratified cluster sampling including self-reported health/disability measures</td>
<td>Residents of informal zones suffer from substantial physical and mental health problems and are exposed to high levels of indoor air pollution. All seem to affect women and the elderly disproportionately. Men are more affected by smoking, occupational respiratory exposures, and injuries.</td>
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<tr>
<td>Ward et al., 2006</td>
<td>Syrians in Aleppo</td>
<td>Mixed-method research design</td>
<td>The prevalence of cigarette smoking was 56.9% among men and 17.0% among women. The prevalence of waterpipe smoking was 20.2% among men and 4.8% among women. Daily use predominated for cigarettes (29.0%), while the opposite was seen in waterpipe use with 10.6% smoking occasionally. Interest in quitting was greater for cigarette than waterpipe smokers (74.0% v 48.6%), while quit rates were higher for waterpipe compared to cigarettes (28.2% v 16.5%). In-depth ethnographic interviews with smokers show that smoking waterpipe is often viewed as an aesthetic enjoyable experience, while smoking cigarettes is viewed as a mundane anxiety-relieving addiction. Clinical laboratory studies reveal that both waterpipe and cigarette smokers in Syria are exposed to smoke toxicants and exhibit dependence symptoms.</td>
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| Smriga et al., 2004 | Syrians in north-western Syria | As part of a 3-month randomized double-blind study with poor Syrian communities consuming wheat as a staple food | Lysine is a limiting amino acid in diets based on wheat as the staple. In the lysine-fortified group, the plasma cortisol response to the blood drawing as a cause of stress was reduced in females, as was sympathetic arousal in males as measured by skin conductance. Lysine fortification also significantly reduced chronic anxiety as measured by the trait anxiety inventory in males. These results suggest that some stress responses in economically weak populations consuming cereal-based diets can be improved with lysine fortification.
<table>
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<tr>
<th>Study (Author/Year)</th>
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<th>Age (years)</th>
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<td>LAS/PAPF AM, 2002</td>
<td>Syrian nationals, 2001</td>
<td>General health population survey</td>
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<td>General Health Survey of 2001: 10.2% of the youth between 15 and 24 felt anxious and 7.1% reported feeling depressed.</td>
</tr>
</tbody>
</table>
Full List of References:


Salem-Pickartz, J. (2009). Iraqi refugees in Jordan research their own living conditions: ‘we only have our faith and families to hold on to’. *Intervention: International Journal of Mental Health, Psychosocial Work & Counselling in Areas of Armed Conflict, 7*(1), 34-49.


Unknown (2012). *Screening Iraqi uprooted children in SAR for patterns of emotional and behavioral disorders, and PTSD*. Internal Presentation 01/2012 at UNHCR Syria.


