

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

For: Quosh, C., Eloul, L., Ajlani, R. (2013). Syria – Refugees and Displaced in the past and current crises: Systematic Review Assessing the Mental Health Profile and System. *Intervention: International Journal of Mental Health, Psychosocial Work & Counselling in Areas of Armed Conflict*, 11(3).

Search terminology used in systematic review for Iraqi Refugees

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

\*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.)

	Study (Author/ Year)	Population, Location, Time  Sample Size	Design Methodology Age (years) Gender (% female) Measures	Main Findings about Mental Health Profile and Outcome
<b>Iraqi Refugees published literature (database search)</b>				
<b>SYRIA</b>				
1	Tappis et al., 2012	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	<u>Domestic violence</u> 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
<b>SYRIA &amp; JORDAN</b>				
2	Cope, 2011	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	<u>Psychological outcome</u> 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 <u>need for psychosocial services</u> 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)
3	Doocy et al., 2011	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,	<u>Food security and food assistance:</u> - 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%)

		<p>Jordan: N= 1,200 households (4,997 individuals)</p> <p>Syria: N= 813 households (3,684 individuals)</p>	<p>120 clusters split proportionally between the Amman and non-Amman Iraqi populations, Syria: 80 x 10 (see above)</p> <p>Questionnaire was developed in Jordan with input from different agencies and stakeholders</p> <p>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</p>	<p>- 71% of Iraqis in Syria sold their food rations, compared to only 41% of Iraqis in Jordan</p> <p>- Around 10% of the participants in Jordan and Syria went an entire day without eating a meal, and around 20% reported ever feeling hungry</p> <p>Cash assistance:</p> <p>- Living expenses are significantly higher in Jordan than they are in Syria</p> <p>- Cash assistance was limited both in Jordan and Syria 13.9% and 25.3 % respectively</p> <p>In Jordan cash assistance was positively associated with, large number of individuals in household, low economic status, and registration with the UNHCR</p> <p>- In Syria cash assistance was associated with female headed households, UNHCR registration, residing in Damascus (close to UNHCR main office) and families with children</p>
4	Doocy et al., 2013	<p>Iraqi refugees in Jordan and Syria</p> <p>Jordan: N= 1,200 households (5,440 individuals) UNICEF</p> <p>Syria: N = 813 households (3,923 individuals) ICMC Oct 2008 (Jordan) and March 2009 (Syria)</p>	<p>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)</p> <p>Included Hopkins Symptom Checklist for one randomly selected adult of the household</p>	<p><u>Disability (physical and mental)</u></p> <p>- 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</p> <p>- 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</p> <p>- 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.</p> <p><u>Mental disorders / symptoms</u></p> <p>- Depression was the leading cause of mental health disability</p> <p>- 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</p> <p>- 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).</p> <p>- 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)</p> <p><u>Access to care</u></p> <p>- Majority of respondents in both countries perceived healthcare as unaffordable but accessible; cost was an important barrier to care</p>

	JORDAN			
5	Doocy et al., 2010	Iraqi doctors arriving in Jordan after the invasion of 2003  N = 401	Respondent-driven sampling, 3 seeds were used and chains were carried out to 10-11 waves of respondents; interviews in person or by phone	<u>Traumatic experiences of Iraqi doctors and reasons for their flight</u> <ul style="list-style-type: none"> <li>- Flight from Iraq was associated with a violent event in 61 % (confidence interval [CI]: 56-65) of cases</li> <li>- 75 % (CI: 70-79) of doctor households experienced a violent event before migration</li> <li>- 17% experienced kidnappings or assassination attempts (CI: 25-34);</li> <li>- Male sex and older age were significantly associated with increased risk in multivariate models</li> <li>- Only 30 % (CI: 25-34) of doctors reported they have plan to return to Iraq when the conflict is over</li> <li>- 6 % (CI: 4-9) reported planning to return to Iraq within a year</li> <li>- Majority, 52% (CI: 47-57) planned to settle in a third country</li> </ul>
6	Bader et al., 2009  (part of the results published before Doocy et al., 2008)	Iraqi refugees in Amman, Jordan  Jan & Feb 2008  N= 664	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	<u>Psychological outcome / Need for MH services and PSS</u> <ul style="list-style-type: none"> <li>- 49% (95% CI = 45-53%) reported needing mental health services for themselves or a member of the household</li> <li>- 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%)</li> <li>- 5% (95% CI = 3-8%) of those in need had access to services</li> <li>- 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</li> <li>- 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)</li> <li>- Responders citing violence as a factor were twice as likely to be from Baghdad (OR = 2.28; 95% CI = 1.03-6.91)</li> <li>- 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)</li> <li>- 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%</li> <li>- Being a part of a female headed household decreased the need by 81% (OR = 0.19; 95% CI = 0.06-0.57%)</li> <li>- 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</li> <li>- Results suggest that mental health needs among this population will increase further</li> <li>- 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.</li> </ul>
7	Salem-Pickartz, 2009	Iraqi refugees in Amman, Jordan	Survey designed and conducted by 36 Iraqi	<u>Health outcome</u> <ul style="list-style-type: none"> <li>- 59% of the interviewees reported physical health problems; most frequently mentioned</li> </ul>

		July 2007  N= 354	refugees; Participants age 10-86, mixture of institution-based and 'snowball' sampling 53,7% female, 18,6% below 18 years	<p>were illnesses that are, among others, related to stress</p> <p><u>Psychological outcome and perceived causes</u></p> <ul style="list-style-type: none"> <li>- When asked about their physical ailments, 14% mentioned, primarily psychological problems such as anxiety, depression, and 'going mad'</li> <li>- 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%)</li> </ul> <p><u>Social concerns / support</u></p> <ul style="list-style-type: none"> <li>- Neighbors and friends from Iraq were considered primary sources of information</li> <li>- 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</li> <li>- Members of the immediate family were primary emotional comfort resources for all respondents</li> </ul> <p><u>Coping strategies</u></p> <ul style="list-style-type: none"> <li>- 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</li> <li>- 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%)</li> </ul>
8	Jordans et al., 2012	Iraqi refugees in Jordan (and Bhutanese refugees in Nepal)	<p>Series of mediator analyses, using data from Jordan (Iraqi refugees) and Nepal (Bhutanese refugees)</p> <p>Measures: 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)</p>	<p><u>Role of current perceived needs in explaining the association between past traumatic exposure and distress in humanitarian settings</u></p> <ul style="list-style-type: none"> <li>- Current perceived needs were found to mediate the association between past traumatic exposure and distress in Jordan</li> </ul> <p>=&gt; an integrated approach that includes a focus on daily stressors should be adopted to mitigate the impact of traumatic exposure in humanitarian settings</p>
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	<p>Cross-sectional study with nutritional and health status focus</p> <p>Presented results based on 156 women selected for short interviews</p>	<ul style="list-style-type: none"> <li>- On self-reporting of personal health, 15.4% (24 out of 156) of homemakers reported <u>neurological or psychological disorders</u> and 16.7% (26) had non-specific complaints of general pain and weakness</li> </ul>

10	Yanni et al., 2012	US-bound Iraqi refugees in Amman, Jordan (IOM clinics)  June 2007–September 2009  N = 18,990	Analysis of medical screening data with focus on Health Profile and Chronic Diseases Comorbidities	<p><u>Mental health of Iraqi refugees to be resettled to the U.S.</u></p> <ul style="list-style-type: none"> <li>- 0.9% of screened US-bound Iraqi refugees were identified with neuro-developmental and mental disorders</li> <li>- 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</li> </ul> <p>Note: The sample represents refugees selected for resettlement to the U.S. The prevalence of mental health problems and mental disorders in refugees accepted for resettlement to the U.S. studied in Jordan was significantly lower than what is reported in other studies. With the existing data no conclusion can be made as to whether this is related to the resettlement decision or the selection of persons and families for resettlement.</p>
11	Chynoweth, 2008	<p>Iraqi refugees in Jordan</p> <p>Jordan: N= 8 families and 30 individuals</p> <p>Agencies: 5 United Nations agencies</p> <p>6 local organisations</p> <p>8 international organizations</p>	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	<p><u>Reproductive health and sexual violence among Iraqi refugees in Jordan</u></p> <ul style="list-style-type: none"> <li>- 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)</li> <li>- 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</li> <li>- 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.</li> <li>- UN agencies, international and local organizations do not prioritize reproductive health services</li> <li>- Sexual exploitation was reported by many Iraqis in Jordan (<i>not quantified</i>)</li> <li>- The Iraqi Aid Association for Chronic Patients, reported observed discrimination against patients who are HIV + (in Iraq)</li> <li>- 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</li> <li>- 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</li> <li>- Marital rape was also reported</li> </ul>
LEBANON & JORDAN				
12	LeRoch et al., 2010	<p>Iraqi refugees in Amman, Jordan and Beirut, Lebanon</p> <p>N= 83</p>	<p>Analysis of collected participant data and outcomes for two different psychosocial programs for Iraqi refugees in Amman, Jordan and Beirut, Lebanon</p> <p>Iraqi adults</p>	<p><u>“In between worlds” / traumatic experiences</u></p> <ul style="list-style-type: none"> <li>- 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.’</li> <li>- 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</li> </ul>

1				<p><u>Psychological outcome, mental disorders / symptoms, services use</u></p> <p>Out of the 83 clients the majority suffered from emotional disorders (92.7%), followed by behavioral disorders (55.4%) and sleeping disorders (48.2%)</p> <ul style="list-style-type: none"> <li>- Most prevalent self-reported symptoms to TdH psychologists were specific phobias, fears, nervousness and anxiety in adults and children</li> <li>- Behavioral disorders such as aggressiveness and withdrawal were observed more in children</li> <li>- Sleeping problems were represented mainly by repetitive and traumatic nightmares; frequent awakenings disturbed the parents, and children refused to sleep alone.</li> <li>- Exile-related stressors have exacerbated distress, and as the years of asylum pass the condition of the majority of Iraqis is deteriorating</li> <li>- Half of participants demonstrated a state of psychological distress for over one year</li> <li>- In Jordan more women (55%) consulted the psychologists, with men representing 45% of the patients</li> </ul> <p><u>Social concerns / support, education</u></p> <ul style="list-style-type: none"> <li>- Social isolation, lack of social networks and difficult living conditions contribute to poor mental health</li> <li>- Changes in family structure and unemployment cause fundamental role changes, resulting in a rise in domestic violence</li> <li>- Many Iraqis would relate their problems to obvious social causes or physical health issues only</li> <li>- 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)</li> <li>- 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</li> <li>- 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</li> </ul>
35	LEBANON			
36	13	Bastin et al., 2013	<p>Urban refugees (including Iraqi refugees) with common and severe mental disorders at Médecins sans Frontières (MSF) run community mental health centre in Beirut, Lebanon</p> <p>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</p> <p>Mean age was 39.2 years (28.5-46.5), 64.2% female</p>	<p><u>Psychological outcome</u></p> <p>The most frequent primary diagnoses were depressive disorders (28.8%), anxiety disorders (15.6%) and psychosis (11.5%).</p> <p>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</p> <p>Note: The data analysis was not separated by nationality.</p>

		December 2008 and June 2011 N = 1144 (1.2% Iraqi refugees, 63.7% Lebanese, 31.8% Palestinian)		
	EGYPT			
14	Al Obaidi, 2009	Iraqi refugees in Egypt  June-Sept 2008  N=204	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	<u>Traumatic experiences</u> - 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  <u>Psychological outcome and pre-existing conditions</u> - 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)  <u>Social support</u> - 71% of the respondents described a lack of social support  <u>Socio-economic</u> - 78% were unemployed  <u>Outlook</u> - 32% motivated to return home, 17% planned to stay in Egypt
15	Shaarawi, 2012	Iraqi refugees in Egypt	Mixed-methods approach, ethnographic field research including participant observation, person-centered interviews	<u>Socio-economic, social concerns and education</u> - Majority of participants unemployed, face socio-economic difficulties and decline in living conditions, often causing anxiety regarding future



1		Summer 2009	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	<ul style="list-style-type: none"> <li>- Family as a central aspect of life emphasized, family separation as a cause for suffering</li> <li>- Change in family dynamics, roles, disrupted relationships</li> <li>- Education often primary motivating factor in family decision making – disrupted education main concern</li> <li>- Lack of social support and lack of organized community activities</li> </ul> <p><u>Health, mental health and psychosocial well-being</u></p> <ul style="list-style-type: none"> <li>- Each interviewee reported an average of 1.5 health issues and 2.0 psychological problems, a few reported none (37% health, and 11% <i>hala nufsia</i>)</li> <li>- Interviewees articulated the connection between their <i>mental health/psychosocial wellbeing (hala nufsia)</i> and other aspects of health and well-being often noting that their psychological situation “made them sick” or exacerbated existing conditions</li> <li>- Problems identified as being part of mental health were also sometimes described in medical and/or somatic terms, although emotions, such as tired (<i>ta’aban</i>), nervous, and angry as well as qualitative terms, such as bad or difficult, predominated</li> <li>- Most commonly used adjectives to describe current state: “bad”, “difficult”, “not good”, “not comfortable” “tired”</li> <li>- Most frequent concept: <i>ta’aban</i>, meaning tiredness or fatigue</li> <li>- 16% of men and 10% of women reported either suffering from depression or being depressed</li> <li>- 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</li> <li>- 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</li> <li>- 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</li> <li>- Instability is a main cause for mental health and psychosocial problems</li> <li>- 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</li> </ul>
34	TURKEY			
35	16	Yaman et al., 2012	<p>Refugees in Ankara, Turkey at a private family medical centre</p> <p>September 1997 to March 1998</p> <p>N = 212 (from Iraq 64%, Iran 22%, Ethiopia 8%, Palestinian</p>	<p>Retrospective Analysis of medical records for age distribution, gender, origin, diagnoses, type of treatment and referral</p> <p>41% female, Ages ranged from 19 to 50 years</p> <p><u>Mental health / disorders</u></p> <ul style="list-style-type: none"> <li>- 12% of the refugees treated at the clinic were identified with post-traumatic stress disorder</li> <li>- Women were more likely to be identified with PTSD</li> <li>- No other mental disorder or mental health condition was assessed in this study</li> </ul> <p>Note: The data analysis was not separated by nationality.</p>

	Study (Author/ Year	Populati on, Location , Time	Design Methodology Age (years) Gender (% female) Measures	Main Findings about Mental Health Profile and Outcome
	<b>Iraqi Refugees - Grey Literature</b>			
	<b>SYRIA</b>			
1	CDC / UNHCR 2007b	Iraqi refugees, 31 Oct - 25 Nov 2007, UNHCR Regis- tration 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)	<p><u>Psychological outcome</u> 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</p> <p><u>Traumatic Experiences</u> - 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</p> <p>- 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</p>

				<u>Socio-economic and basic needs</u> Main source of income: - 37% savings, 24% remittances, 24% salary, 12% pension - 41% did not reveal the source of their income  <u>Education</u> - 32% of Iraqi children (information obtained on 1109 children) are not enrolled in Syrian schools (compared to 76% in May 2007) - 10% of School-age children working - 46% dropped out of school, 19% of those in order to work, 13% for 'psychosocial issues', i.e., bullying, discrimination  Note: - High education level of the population (31% of the sample have a university degree)  <u>Health (disability)</u> - 4% persons with disabilities or have a family member with disability - 2.1% registered with UNCHR are persons with disabilities
2	Health Sector Appeal, 2007	Iraqi Refugees in Syria  July 2007	Refers to Ministry of Health (MOH), UNICEF and WHO Rapid Assessment	<u>Socio-economic and basic needs</u> - Majority faces financial difficulties (arrived without meaningful financial resources and most do not have employment) - 62% of household heads are unemployed - 35.8% work in private jobs - 45.4% of Iraqi refugee families can be classified as poor or extremely poor - 72% of families live in shared accommodation with Syrian or Iraqi families (average family size is five, sharing accommodation leads to overcrowding) - Mental and psychosocial distress have been further aggravated by the increasing financial difficulties, unemployment, different living environment, and an uncertain future, resulting in psychological fragility, distress and in some cases trauma
		Iraqi Refugees in Syria  February 2007	Refers to WFP rapid food needs assessment	<u>Socio-economic and basic needs</u> – Estimated that 15 % of those registering with UNHCR are unable to meet their expenses for more than three months from the date of arrival in Syria
3	SARC / DRC, 2007  (unpublished)	Iraqi refugees in Syria  Aug - Sept 2007  N = 206	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	<u>Psychological outcome and social concerns</u> - 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

				<p>reasons for doing so</p> <ul style="list-style-type: none"> <li>- Children and adolescents, especially female adolescents, spent most of their time at home watching TV and helping their parents</li> <li>- Boredom, frustration and a lack of Iraqi social support structures was evident</li> <li>- Focus group participants had a difficult time concentrating on issues psychosocial wellbeing; they were preoccupied by material and financial difficulties</li> <li>- Adults expressed to "...have no control...extreme lack of confidence in their personal or collective ability to induce change or improve their situation"</li> <li>- 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</li> <li>- In Damascus / Rural Damascus, higher alienation and hopelessness, hopes for resettlement</li> </ul>
4	UNHCR, 2008	UNHCR registered Iraqi refugees in Syria	Analysis of registration data, identification of medical needs (including psychological) based on registration of 216, 370 refugees	19% of Iraqi refugees registered since 2007 are suffering from an serious medical condition such as chronic illnesses or psychological disorders
5	Loughry et al., 2007  ICMC-USCCB Mission Syria	Iraqi refugees in Syria  Dec 2007	Assessment based on stakeholder interviews	<p><u>Psychological outcome</u></p> <ul style="list-style-type: none"> <li>- 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</li> <li>- Social service agencies in the church reported many significant and distressing incidences of families under enormous psychological stress</li> <li>- Medical doctors reported that many clients reporting to outpatient clinics with physical complaints displayed signs of mental health problems</li> <li>- A stakeholder described children as being anxious, experiencing some difficulty learning and being unable to play</li> <li>- Teenagers are prevented from their life roles and become depressed, some severely</li> <li>- Many adults exhibit severe anxiety and depression</li> </ul>
6	UNICEF, 2007	Iraqi adolescent girls in Damascus, Syria  June-August 2007	<p>4 focus group discussions with Iraqi adolescent girls between the ages of 12 through 18, 1 with Palestinian adolescent girls</p> <p>&gt; 20 interviews with UN partners and NGOs, as well as community-based workers, parents, Iraqi adolescent boys, and other members of the Iraqi refugee community</p> <p>6 case studies of Iraqi girls involved in sex labour</p>	<ul style="list-style-type: none"> <li>- High school drop-out and high interest to continue education</li> <li>- Many experienced the violent death or kidnapping of a family member or friend</li> <li>- Family separation impacts well-being and constant worry about those who remain in Iraq</li> <li>- Many girls feel isolated and report lack outlets to communicate their sadness or frustrations</li> <li>- Loss of support network of friends and isolation</li> <li>- Mobility restrictions</li> <li>- Iraqi girls spend most of their time tending to household chores with their mothers, and often live in cramped living quarters with other relatives in each bedroom</li> <li>- Reported domestic violence</li> <li>- Many Iraqi children work long hours to support their family, earning as little as an equivalent of 12 US\$ a day</li> <li>- Reports of exploitation and abuse (e.g. delay or refusal to pay by employers, verbal and physical abuse)</li> <li>- Reports of the rise in sex labour (many girls under 18)</li> <li>- 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</li> <li>- Reports of girls being trafficked out of Iraq and sold to nightclubs and casinos as dancers, virgin brides, and prostitutes</li> </ul>
7	UNICEF, 2008	Iraqi mothers in	Focus-group discussions and survey with Iraqi mothers (N=22), four	- 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

		Damascus, Syria April-May 2008	consultation sessions with 40 mothers in Child Friendly Spaces (CFSs) in Damascus with random selection of respondents	<ul style="list-style-type: none"> <li>- Mothers reported experiencing high levels of stress and feelings of loneliness</li> <li>- Lack of supportive social networks</li> <li>- Many mothers admitted to taking out their frustration on their children by being irritable, shouting or hitting</li> </ul>
8	WHO, 2010 (unpublished)	Iraqi refugees in Syria N=2,996 families	Family Health Survey	<p><u>Psychological outcome</u></p> <p>Approximately 60% of the interviewed Iraqi refugees described feelings of sadness</p> <p>50% described feelings of desperation, loneliness, and anxiety, as well as difficulties sleeping and the sense that everything requires more effort than usual</p>
9	Tsovili, Coutts & Quosh, 2010 (unpublished)	Iraqi refugee children attending child friendly spaces from Feb 2008 - August 2009  N=21,480	<p>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</p> <p>Average age 10.4 years in database 1 and 9.1 in database 2, almost half are female</p>	<p><u>Children</u></p> <ul style="list-style-type: none"> <li>- 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</li> <li>- Significantly more than half of the assessed children and adolescents displayed psychological symptoms</li> <li>- Approximately half expressed social problems</li> <li>- Approximately a third reported general health problems</li> <li>- Psychosocial well-being impacted by interrelation between experiences of violence and conflict as well as socio-economic conditions in host country</li> <li>- Exhaustion and lack of coping resources and adaptive mechanisms reported</li> <li>- 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</li> </ul> <p>Dateset 1:</p> <p><u>Past distressing experiences</u></p> <p>55.8% of the children and adolescents were documented to have experienced potentially distressing events in the past (N=1497).</p> <p>Following is a list of the reported distressing events:</p> <ul style="list-style-type: none"> <li>26.4% Kidnapping,</li> <li>10.2% Death in family,</li> <li>9% Torture and</li> <li>0.8% Rape</li> </ul> <p><u>Psychological outcome</u></p> <p>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</p> <p>The following is a list of the documented psychological difficulties:</p> <ul style="list-style-type: none"> <li>48.3% Fear,</li> <li>38.1% Anger,</li> <li>24.2% Sleeping problems,</li> <li>22.8% Change in manners,</li> <li>21% Symptoms of depression</li> <li>14.7% Enuresis or soiling and</li> <li>13.7% Passivity</li> </ul>

				<p><u>Social concerns</u></p> <p>51% of the children and adolescents of dataset 1 were identified to manifest at least one social difficulty</p> <p>32.1% of the children and adolescents of this sample were categorized as having learning or concentration difficulties</p> <p><u>Dataset 2:</u></p> <p>- Most common psychological indicators were fear (54.6%), anger (48.8%), sleeping difficulties (24.6%) and depressed mood (20%)</p>
10	UNHCR, 2008-2011 (unpublished)	Iraqi refugees in Damascus, Syria	Internal review of UNHCR participatory assessments between 2008 and 2011, Based on focus group discussions with Iraqi women, men, male and female adolescents	<p><u>Psychological outcome</u></p> <p>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</p> <p>- Exacerbation of epileptic and non-epileptic seizures, increased somatisation</p> <p><u>Social concerns</u></p> <p>- Social isolation and marginalization</p> <p>- Lack of social support</p> <p>- Family conflicts and violence</p> <p>- Lack of future opportunities</p> <p>- Disruption of family structure and roles</p> <p>- Sexual harassment and violence from within and outside the home</p> <p>- Lack of caretakers for vulnerable persons</p> <p>Parents were concerned about education for their children, peer relationships and aggression among children, unstable family situations, stunted development, and child abuse.</p>
11	Al Ammar, 2009/2010	Iraqi refugees in Damascus, Syria  2009  N= 700	Field diagnostic study using validated REF (differentiating acute PTSD symptoms – 1-3 months and chronic – 3-6 months duration)	<p>- Approximately 36% of the respondents presented with chronic or acute symptoms of PTSD</p> <p>- Gender had no significant effect on symptom presentation</p> <p>- Injuries were related to significant increase in acute symptom presentation but not in chronic, as did loss of an immediate family member</p> <p>- The destruction of one's home had significant impact on both acute and chronic symptom presentation</p>
12	UNHCR Survey, 2012	Refugees in Syria  Feb 2012  N = 804	Survey during UNHCR counseling and distributions to assess impact of crisis on socio-economic status of refugees in Syria   52% female	<p><u>Psychological outcome</u></p> <p>- Increased anxiety and fear</p> <p>- Refugee women report that tensions within households are increasing due to worsening financial circumstances and anxieties about the general situation in the country</p> <p>- More than 75% of the interviewed refugees stated that the current prevailing situation has had a negative impact on their mental or physical wellbeing</p>
13	Quosh, 2013	Registered Iraqi refugees in Syria	Survey with culturally-based assessment instrument	<p>- 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</p> <p>- 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)</p> <p>- Clients assessed receiving mental health services and psychosocial support scored higher</p>

		Spring, 2011		
		N=199 households		
14	Unknown author	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	<u>SDQ results</u> <i>Emotional</i> 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%) <i>Conduct:</i> abnormal range: 54.5% <i>Hyperactivity:</i> abnormal range: 42.6% <i>Peer problems:</i> 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)
SYRIA & JORDAN				
15	AFSC, 2008	Iraqi refugees in Amman, Jordan and Damascus, Syria	Interviews with Iraqi refugees and stakeholders	<u>Past traumatic experiences</u> - 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
JORDAN				
16	CDC/UNHCR, 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  <u>Past traumatic experiences</u> - 22% reported having experienced a personal traumatic event - 20% reported having been a survivor of torture  <u>Psychological outcome</u> - 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

				<p><u>Children</u> 43% witnessed violence in Iraq 39% lost someone close through violence</p> <p><u>Social concerns</u> Family life is impacted because of the stressful situation, with increased prevalence of domestic violence - linked to the inability of traditional heads of households to provide for the family through employment - resulting in a loss of role and identity for traditional heads of households - Men (representing 88% of the heads of households in the study) report depression, frustration and anger as a consequence of the inability to fulfil their traditional roles within the family - Misperceptions about the impact of the Iraqi refugee influx in Jordan in addition to general sense of mistrust impact the relation between Iraqi refugees and Jordanian host community</p>
17	Jayawickrama & Gilbert, 2008 (unpublished)	Iraqi Refugees in Jordan	Qualitative assessment	<p><u>Psychological outcome and social concerns</u> - 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</p>
JORDAN & LEBANON				
18	IOM, 2008	<p>Iraqi refugee families in Lebanon and Jordan</p> <p>Nov 2007 – Jan 2008</p> <p>N &gt; 209 households and 10 youth</p>	<p>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</p>	<p><u>Psychological outcome and social concerns</u> 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</p>



				<ul style="list-style-type: none"> <li>- 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)</li> <li>- Women, in particular, show a tendency not to share emotional suffering within the family, for cultural and gender-related issue</li> <li>- Most families in Jordan are assumed to be in phase 2, and most in Lebanon to be between phase 1 &amp; 2</li> </ul>
	IRAQ			
19	IOM 2005-2006	IDPs in Iraq  N = 113 IDPs and host families	60 stakeholder interviews and 113 interviews with IDPs and host families were conducted in 6 governorates, 55 field observations	<ul style="list-style-type: none"> <li>- Depression, frustration, stress, fears for security and humiliation are, according to the stakeholders, widespread feelings among Iraqi population</li> <li>- 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</li> </ul> Reasons of their psychosocial needs: <ul style="list-style-type: none"> <li>- Insecurity</li> <li>- Lack of justice and of state control</li> <li>- Unemployment</li> <li>- Lack of basic services, and</li> <li>- The instability of the situation</li> </ul> <ul style="list-style-type: none"> <li>- Lack of social recreational life, stress related to unemployment, shortage of basic services and food, also resulting in despair and family violence</li> <li>- 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</li> <li>- There is an increase in family separation, due to economic constraints</li> <li>- Most IDPs are, according to the Hertz scale, facing a rebound phase</li> <li>- Most returnees, with the exclusion of Baghdad, are in between the rebound and coping phases</li> <li>- Secondary displaced present a very variable status, where indicators of impact rebound and coping phases often coexist</li> <li>- Political divisions among sects and consequent discrimination are considered a main cause of distress for a small percentage of the interviewees</li> <li>- A large percentage (almost half) of the IDPs interviewed, think that the relation with the host community is non-existent or very negative</li> <li>- 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</li> </ul>
20	Refugee International, 2009	Iraqi refugee returnees to Iraq, displaced within Iraq (N unclear)	Interviews with Iraqi refugee families in Northern Iraq as well as with community center workers	<u>Sexual violence</u> In both the Kurdistan Regional Government (KRG) and Syria, extreme financial pressures on displaced families are resulting in increased reports of forced early marriages, “temporary marriages” (muta) , sex labour, and trafficking of women and girls <ul style="list-style-type: none"> <li>- Increased domestic violence</li> <li>- Displaced women in KRG have difficulties accessing already weak gynecological, preventive and mental health services</li> <li>- Increased school drop-out in Syria</li> </ul>
	IRAQ - additional			
	Alhasnawi, 2009 WHO, IMHS	Iraqi mental health survey (IMHS)	Data from a 2007 - 2008 national face-to-face survey of the adult Iraq population, Interviews were administered to a probability sample of Iraqi	<ul style="list-style-type: none"> <li>- The estimated lifetime prevalence of any mental disorder was 18.8%</li> <li>- Cohort analysis documented significantly increasing lifetime prevalence of most disorders across generations, most pronounced for panic disorder and post-traumatic stress disorder, with lifetime-to-date prevalence 5.4-5.3 times as high at comparable ages in the youngest (ages 18-34) as oldest (ages 65+)</li> <li>- cohorts</li> </ul>

1		2006 and	household residents by trained lay	- Anxiety disorders were the most common class of disorders (13.8%) and major depressive disorder
2		2007	interviewers, the WHO Composite	(MDD) the most common disorder (7.2%)
3		N = 4,332	International Diagnostic interview	- Twelve-month prevalence of any disorder was 13.6%, with 42.1% of cases classified mild, 36.0%
4			(CIDI) was used to assess DSM-IV	moderate, and 21.9% serious
5			disorders	- The disorders most often classified serious were bipolar disorder (76.9%) and substance-related disorders
6				(54.9%)
7				- Socio-demographic correlates were generally consistent with international epidemiological surveys, with
8				the two exceptions of no significant gender differences in mood disorders and positive correlations of
9				anxiety and mood disorders with education
10				- Only 2.2% of IMHS respondents reported receiving treatment for emotional problems in the 12 months
11				before interview, including 23.7% of those with serious, 9.2% with moderate, and 5.3% with mild
12				disorders and 0.9% of other respondents
13				

Table 2 Web Appendix: Syrian IDPs and Refugees –  
Selected Characteristics and Summary of Studies Identified to Meet Systematic Review Criteria

For: Quosh, C., Eloul, L., Ajlani, R. (2013). Syria – Refugees and Displaced in the past and current crises: Systematic Review Assessing the Mental Health Profile and System. *Intervention: International Journal of Mental Health, Psychosocial Work & Counselling in Areas of Armed Conflict*, 11(3).

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

	Content	Population	Location
Key Search Term	Mental Health	Syrian	Syria
Synonyms	Psychosocial Well-being*	Syrians	Regional Locations
	Emotional Well-being*	Syrian Refugee(s)	Jordan
	Psychosocial*	Syrian asylum seeker	Lebanon
	Social	Syrian (internally) displaced	Turkey
	Psychological		Iraq
	Psychiatric		Egypt
	Trauma		
	Distress		
Exclusions**		Hamster	

\*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.

1  
2 **Summary of main findings by study and location, divided by grey literature and additional literature**

3 (The results are clustered according to content of studies and guiding framework.)  
4

Study (Author/ Year)	Population, Location, Time  Sample Size	Design Methodology Age (years) Gender (% female) Measures	Main Findings about Mental Health Profile and Outcome
<b>Syrian IDP and Refugees - Grey Literature</b>			
<b>SYRIA</b>			
1 MHPSS Working Group, 2012	Syrian internally displaced  September 2012  N= 14	Qualitative stakeholder assessment among 14 MHPSS Working Group members  Stakeholders covered the areas of Damascus, rural Damascus, Homs and Aleppo, but could not provide detailed updates on the profiles of other governorates.	<u>Basic Needs</u> 60% mentioned lack of basic needs impacting mental health and well-being, in order of priority: <ol style="list-style-type: none"> <li>1. Safety and Security</li> <li>2. Housing / Shelter</li> <li>3. Food Economic problems (incl. unemployment, poverty)</li> <li>4. Health</li> </ol> <u>Psychological outcome</u> <ol style="list-style-type: none"> <li>1. Fear, anxiety</li> <li>2. Grief, mourning, bereavement</li> <li>3. Depressed mood and loss of trust</li> <li>4. Isolation, increased distress, aggressiveness and anger</li> <li>5. Loss of control, inability to accept circumstances</li> </ol> <u>Social concerns and support</u> <ol style="list-style-type: none"> <li>1. Separated and scattered families</li> <li>2. Lack of social support, social relations</li> <li>3. Change in gender roles, lack of activities</li> </ol> Children: Development and attachment problems <u>Resources</u> <ul style="list-style-type: none"> <li>Adaptation, acceptance, community outreach &amp; support, new social networks, involvement in planning, activated charities, NGOs &amp; volunteerism</li> </ul> <u>Key concern</u> <ul style="list-style-type: none"> <li>Increased family and sexual violence</li> </ul> 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.

CQuosh et al. Table 2 Web Appendix: Syrian IDPs & Refugees – Selected characteristics and summary of studies identified to meet systematic review criteria

2	UNHCR/ SARC, 2013	Syrian internally displaced  January 2013	Qualitative stakeholder assessment with psychiatrists, psychologists, master trainers, and psychosocial community volunteers  Stakeholders covered the areas of Damascus, rural Damascus, Homs and Aleppo, but could not provide detailed updates on the profiles of other governorates.	<p><u>Priority concerns of displaced populations/basic needs</u></p> <ul style="list-style-type: none"> <li>▪ Lack of security</li> <li>▪ Sudden forced displacement</li> <li>▪ Lack/destruction of shelter, access to basic services and livelihood</li> <li>▪ Lack/destruction of or no access to schools and educational institutions</li> <li>▪ High unemployment, increased poverty and severe socio-economic problems</li> </ul> <p><u>Psychological outcome</u></p> <ul style="list-style-type: none"> <li>▪ Difficulties adapting to the situation and dealing with multiple losses, grief and mourning</li> <li>▪ Hopelessness and loss of trust</li> <li>▪ Continuous fear and anxiety</li> <li>▪ Disruption of social relationships, disintegration of family and social structures</li> </ul> <p><u>(Maladaptive) coping mechanisms</u></p> <ul style="list-style-type: none"> <li>• Increase in gender-based violence, child abuse, violence against the elderly</li> <li>• Increase in number of early marriages</li> <li>• Increase in child labor</li> </ul> <p><u>Community resources and adaptive coping Mechanisms:</u></p> <ul style="list-style-type: none"> <li>• Activated community networks, community support, youth engagement</li> <li>• Active community leaders</li> <li>• Religious coping</li> </ul> <p><u>Priority concerns for frontline workers and volunteers</u> Increase in burnout symptoms, symptoms of depression and anxiety, grief and mourning</p>
3	SARC, 2012	Syrian internally displaced  Mid-2012	Qualitative assessment by SARC volunteers in schools and collective shelters working with children in Damascus and rural Damascus	<p>The following trends among children were described</p> <p><u>Mental Health Outcome and Trends among Children</u></p> <ul style="list-style-type: none"> <li>▪ Increased sadness and fatigue</li> <li>▪ Loss of interest, pessimistic outlook and passiveness</li> <li>▪ Increased fears and anxiety</li> <li>▪ Increased withdrawal and attachment to parents</li> <li>▪ Sleeping difficulties (incl. nightmares), bedwetting</li> <li>▪ Reduced levels of concentration, comprehension and understanding</li> <li>▪ Increased headaches</li> <li>▪ Increased aggression</li> <li>▪ Increased violence among peers and within families</li> <li>▪ Difficulties for parents in dealing with their children</li> </ul> <p>Volunteers reported being severely affected by their work, including experiencing anxiety and depression symptoms, somatic complaints, anger, grief, and mourning.</p>
4	J-RANS II, 2013	Syrian internally displaced and affected population in northeastern governorates	(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,	<p><u>Child protection, well-being concerns and injuries</u></p> <ul style="list-style-type: none"> <li>- 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</li> <li>- 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 Idleb</li> <li>- <u>Signs of distress</u> are a common and widespread concern</li> </ul>

CQuosh et al. Table 2 Web Appendix: Syrian IDPs & Refugees – Selected characteristics and summary of studies identified to meet systematic review criteria

1		May 2013	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)	<ul style="list-style-type: none"><li>- 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</li><li>- 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</li><li>- Children with disabilities, chronic diseases or from single parent families are particularly vulnerable and do not have equal access to services</li><li>- 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</li><li>- Same signs were reported by children in other camps and host communities in Idleb Governorate</li></ul> <p><u>Psychological outcome:</u></p> <ul style="list-style-type: none"><li>- “<i>Frustration</i>” (including anxiety, psychological stress etc.) was rated as a high protection concern, “<i>violence against civilians</i> and <i>psychological trauma</i>” were priority issues in all assessed areas of Aleppo City</li></ul> <p><i>Frustration</i> was mentioned as a priority concern in 20 of the 106 assessed sub-districts however without further specification by key informants.</p> <p>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.</p> <p>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.</p> <p><u>Social concerns and support</u></p> <p>Communal tensions were attributed to assistance being insufficient to meet the needs of all those affected.</p> <p><u>Most vulnerable and affected groups</u></p> <ul style="list-style-type: none"><li>- Destitute families</li><li>- Female-headed households</li><li>- Older person headed households</li><li>- Households with persons with a disability</li></ul> <p><u>Education</u></p> <ul style="list-style-type: none"><li>- 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</li><li>- In the northern governorates, now only 43% of the schools were reported to be functional and used for educational activities</li><li>- 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</li></ul>
5	UNICEF, 2013	Syrian children	Remote qualitative assessment	<ul style="list-style-type: none"><li>- 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)</li><li>- Children’s exposure to extreme violence is causing serious psychological distress and impacting school performance</li><li>- Many children have been unable to attend school for the past 2 years</li></ul>

CQuosh et al. Table 2 Web Appendix: Syrian IDPs &amp; Refugees – Selected characteristics and summary of studies identified to meet systematic review criteria

				Note: Approximately 20% of Syria's schools are either used as collective shelters for IDPs or have been destroyed or damaged (OCHA, 2013b, 24; OCHA, 2013c). Current drop-out rates as well as reports on school attendance before the crisis vary across assessments. According to a UNICEF/SCFA (2007) report, before the crisis, 98% of Syrian children attended primary school, while the J-RANS II report (see above) refers to a rate of 89% for rural areas.
	<b>JORDAN</b>			
6	IMC / JHAS, 2012	Syrian refugees in host communities in Jordan January 2012  N = 353	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 average age 37 years 28% female	<ul style="list-style-type: none"> <li>- 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</li> <li>- 45% respondents felt intense fear all or most of the time</li> <li>- The most frequently cited coping methods were praying, smoking and socializing with friends and family</li> </ul>
7	IMC / UNICEF, 2012	Syrian refugees in Za'atari refugee camp August 2012  N = 69	MHPSS information gathering exercises, qualitative assessment, combination of convenience and snowball sampling, with individual and group interviews, using adapted versions of the tools 10 and 11 from the WHO/UNHCR MHPSS Assessment Toolkit 50% female	<p>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</p> <ul style="list-style-type: none"> <li>- Increased levels of worry, fear, psychological distress as well as aggressiveness and boredom among the interviewed refugees</li> <li>- The most frequently cited coping methods were as well also praying or reading the Quran, talking to people, family, and friends, household chores, and cooking</li> </ul>
	<b>LEBANON</b>			
8	IMC, 2011	Syrians refugees at the northern Lebanese-Syrian border  May-June, 2011  N = 100	Qualitative assessment in the region of Wadi Khaled, using a free-listing tool 11 from the World Health Organization (WHO) MHPSS Assessment Toolkit  64 % female	<ul style="list-style-type: none"> <li>- 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</li> <li>- The most frequently reported mental health problems were anxiety, feeling depressed, lethargy, eating and sleeping problems, anger and fatigue</li> <li>- Anger, fear, anxiety, feeling depressed and stress affect relationships within families and daily functioning and health</li> <li>- Anxiety leads to feeling hostile and hopelessness to feeling guilty</li> <li>- Inability of following up daily tasks as well as isolation were mentioned</li> <li>- 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</li> <li>- Mothers expressed an inability to show affection towards their children, feeding into their feelings of isolation, alienation, and negative relationships</li> <li>- Positive coping mechanisms: exercising, going out, and playing with one's children.</li> <li>- Negative coping mechanisms: smoking, watching TV [specifically the news and worrying about the ones</li> </ul>

CQuosh et al. Table 2 Web Appendix: Syrian IDPs &amp; Refugees – Selected characteristics and summary of studies identified to meet systematic review criteria

				still in Syria], doing nothing [which caused ‘negative ruminating thoughts’ to occur], and staying alone [increasing one’s feelings of social alienation]
9	MDM (Pérez-Sales), 2013	Syrian refugees in Bekaa Valley, Lebanon  Jan 2013  N = 154	Semi-structured individual interviews, Cluster sampling and latin square method, 66% female	<ul style="list-style-type: none"> <li>- Well-being is greatly attributed to fulfilling basic needs with the following priorities: 1) income and future, 2) shelter, and 3) food</li> <li>- Most people experience overwhelming emotions of fear, anger, fatigue, or hopelessness</li> <li>- Feelings of humiliation and frustration with dependency on aid were prevalent as well</li> <li>- Negative emotions seemed to increase over time</li> <li>- Among the refugee community a lack of unity, community organization, support, trust and confidence was reported as well as increased frustration and anger</li> <li>- Gender-based violence as well as experiencing torture were reported among men and women</li> <li>- Praying is a main coping strategy and the community asked for financial support, employment, assistance, shelter, education, and activities for children and adolescents</li> </ul>
10	Mobayad (2013, in preparation ) Referenced in Abou-Saleh et al. (2013)	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  Note: location was not confirmed by author	<u>Psychological outcome</u> <ul style="list-style-type: none"> <li>- prevalence rates of PTSD from 36.3% to 61.9% among adults</li> <li>- main predictors were exposure to fighting and hostility, history of trauma</li> <li>- prevalence rates of PTSD from 41.3% to 76.49% among children</li> <li>- main predictors were number of traumatic experiences related to conflict</li> </ul>
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)	<ul style="list-style-type: none"> <li>- 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.</li> <li>- The high cost of living, low availability of drugs, and psychological stress were concerns</li> <li>- Many women, men, children report psychological problems, more prevalent in Wadi Khaled (based on survey results)</li> </ul> <p>Out of 83 patients consulted by mental health team (based on mental health records)</p> <ul style="list-style-type: none"> <li>- Depression represented 50% of cases and anxiety accounted for 25%</li> <li>- Some patients reported having been tortured and raped</li> </ul> <p><u>Children:</u></p> <ul style="list-style-type: none"> <li>- High levels of distress</li> </ul>
<b>TURKEY</b>				
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 between 9 and 18, mean age 12.4 56% female	<ul style="list-style-type: none"> <li>- Children display different levels functioning and adaptation</li> <li>- Three out of four Syrian children have lost a loved one in the fighting</li> <li>- More than 60% experienced events where they felt their lives were in danger</li> <li>- 50% had been exposed to 6 or more traumatic</li> <li>- However, 71% of the girls and 61% of the boys had strong close relationships to trusted persons for help and support</li> <li>- 30% reported that they had been separated from their families</li> <li>- Around 60% of the children reported symptoms of depression (significantly higher among girls)</li> <li>- 45% reported symptoms of PTSD</li> <li>- 22% aggression</li> <li>- 65% psychosomatic symptoms to a degree that seriously reduces the children’s level of functioning</li> </ul>



CQuosh et al. Table 2 Web Appendix: Syrian IDPs &amp; Refugees – Selected characteristics and summary of studies identified to meet systematic review criteria

13	Marwa, 2012 Referenced in Abou-Saleh et al. (2013)  Marwa, 2013	Syrian refugees in four camps in southern Turkey  N=300	Unknown	- reported the prevalence rate of PTSD to be 61%, morbid anxiety 53% and morbid depression 54%
	Study (Author/ Year)	Population, Location, Time  Sample Size	Design Methodology Age (years) Gender (% female) Measures	Main Findings about Mental Health Profile and Outcome
<b>Additional Published Literature (Pre-2011 Conflict)</b> <b>Mental health in Syria - Databases</b>				
1	Kilzieh et al., 2008	Syrians in Aleppo  N = 2038	Cross-sectional, population-based study in Aleppo on adults aged 18-65 utilizing a structured interview questionnaire  mean age 35.3 55 % female	- 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)
2	Kilzieh et al., 2010	Syrians in Aleppo  N = 2038	Cross-sectional, population-based study in Aleppo on adults aged 18-65 utilizing a structured interview questionnaire physical impairment was measured via an adapted 12-item World Health Organization, Health State Description Individual Questionnaire which includes both physical and emotional items  mean age 35.3 55 % female	- 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
3	Maziak et	Low-income	Sample recruited from	- Current physical abuse (battering at least 3 times during the previous year) was found in 23% of the

CQuosh et al. Table 2 Web Appendix: Syrian IDPs & Refugees – Selected characteristics and summary of studies identified to meet systematic review criteria

1		al., 2003	women in Aleppo, Syria	8 randomly selected primary care centers in Aleppo A special questionnaire was used including questions about physical abuse, the self- reporting questionnaire (SRQ- 20), mean age 28 100 % female	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
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10	4	Maziak et al., 2002	Low-income women in Aleppo, Syria	Sample recruited from 8 randomly selected primary care centers in Aleppo A special questionnaire was used incl. the self-reporting questionnaire (SRQ-20) and background questions, mean age 28 100 % female	- 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
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19	5	Maziak, W. et al., 2005	Syrians in Aleppo	Household survey with randomly selected sample using stratified cluster sampling including self-reported health/disability measures mean age 34 54% female	- 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
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25			N = 1,021		
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27	6	Ward et al., 2006	Syrians in Aleppo	Mixed-method research design Mean age 35.3 years 54% female	- 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
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38	7	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
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CQuosh et al. Table 2 Web Appendix: Syrian IDPs & Refugees – Selected characteristics and summary of studies identified to meet systematic review criteria

	Study (Author/ Year	Population, Location, Time  Sample Size	Design Methodology Age (years) Gender (% female) Measures	Main Findings about Mental Health Profile and Outcome
	Additional Grey Literature (Pre-2011 Conflict) Mental health etc. in Syria			
1	LAS/PAPF AM, 2002	Syrian nationals, 2001	General health population survey	General Health Survey of 2001: 10.2% of the youth between 15 and 24 felt anxious and 7.1% reported feeling depressed.

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