Health needs and priorities of Syrian refugees in camps and urban settings in Jordan: perspectives of refugees and health care providers

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Abstract

Background: The United Nations has declared the Syrian refugee crisis to be the biggest humanitarian emergency of our era. Neighbouring countries, such as Jordan, strain to meet the health needs of Syrian refugees in addition to their own citizens given limited resources.

Objectives: This study aimed to determine the perspectives of Syrian refugees in Jordan, Jordanian health care providers and other stakeholders in addressing the public health issues of the refugee crisis.

Methods: Qualitative and quantitative methodologies were used to explore Syrian refugee health needs and services in camp and urban settings in Jordan. Focus group discussions and key informant interviews were used to identify needs, challenges and potential solutions to providing quality health care to refugees. By-person factor analysis divided refugee participants into 4 unique respondent types and compared priorities for interventions.

Results: Focus group discussions and key informant interviews revealed a many different problems. Cost, limited resources, changing policies, livelihoods and poor health literacy impeded delivery of public and clinical health services. Respondent Type 1 emphasized the importance of policy changes to improve Syrian refugee health. Type 2 highlighted access to fresh foods and recreational activities for children. For Type 3, poor quality drinking-water was the primary concern, and Type 4 believed the lack of good, free education for Syrian children exacerbated their mental health problems.

Conclusions: Syrian refugees identified cost as the main barrier to health care access. Both refugees and health care providers emphasized the importance of directing more resources to chronic diseases and mental health.

Keywords: Refugee Health, Health Care Services, Syria, Jordan, Syrian Refugees

Citation: Al-Rousan T; Schwabkey Z; Jirmanus L; Nelson BD. Health needs and priorities of Syrian refugees in camps and urban settings in Jordan: perspectives of refugees and health care providers. East Mediterr Health J. 2018;24(3):243–253. https://doi.org/10.26719/2018.24.3.243

Received: 04/05/16; accepted: 14/02/17

Introduction

The United Nations has declared the Syrian crisis to be the worst refugee crisis since the Second World War (*1*). The vast majority of displaced Syrians, some 5 million people, live in Jordan, Lebanon, and Turkey, whose economies and social safety nets strain to serve a growing refugee population, in addition to their own citizens.

According to the Jordanian government, Jordan currently hosts 1 million Syrian refugees, the vast majority of whom live on less than US$ 2 a day (*2*). Jordan offers free universal health coverage to its citizens, which was available to Syrian refugees until 2014. Between 2012 and 2013, the number of physicians per 10 000 people in Jordan declined from 27.1 to 20.2, due to the influx of 600 000 Syrian refugees (*3*). Citing untenable health care costs, the Jordanian Ministry of Health ended full coverage of health care for Syrian refugees in September 2014 (*4*). The United Nations High Commissioner for Refugees (UNHCR) now covers 100% of the cost of primary and secondary health services for refugees who are referred from camps. However, 80% of Syrian refugees live in urban areas of Jordan (*5*) and must now pay foreigner's fee at government clinics (*6*). According to UNHCR, mean monthly household out-of-pocket health care spending for Syrian refugees was approximately US$ 80 in 2014, a large sum for an average Syrian family with a monthly household income of US$ 322 (*7*). Refugees living outside of camps are more vulnerable to these costs, as only a few hospitals and clinics offer subsidized services for Syrian refugees in urban settings.

Research has focused on isolated issues that have affected the health of Syrian refugees in neighbouring countries, such as health service access and utilization (*8*,*9*), the prevalence of chronic conditions among certain refugee age groups (*10*), the prevalence of infectious diseases among refugees, and the psychosocial and mental health care shortcomings. However, research on how refugees prioritize these issues that affect their health is scarce.

Little is known about the perspectives of Syrian refugees themselves, Jordanian health care providers and other important stakeholders, such as policy-makers and aid workers, when it comes to addressing the

growing clinical and public health burden. This will be critical in refining programmes to serve the displaced Syrian population now and in years to come. This study introduces the unheard voices of both refugees and the host population to delineate health needs and prioritize allocation of health care spending 5 years after the start of the Syrian conflict.

Methods

This study used a mixed-methods approach to identify the needs of Syrian refugees living in camp and community settings in Jordan. A total of 230 Syrian refugees participated in the study. Convenience sampling was used to recruit Syrian refugees and Jordanian health care workers. Key informants and health care providers were recruited from the Jordanian Ministry of Health and UNHCR.

Community development centres in Irbid and Kafrein were used to recruit participants in urban settings because they are located in the areas with the largest concentration of Syrian refugees and serve as gathering places which offer recreational, psychosocial and public health services. Al Zaatari participants were recruited through the public health office at the UNHCR. Data were collected from October to December 2015.

Triangulation of the data was sought by using different data sources (multiple stakeholders) and mixed methodologies. Large focus group discussions were used to identify the leading themes on the topic, followed up with one-on-one key informant interviews to verify that the themes identified matched. The Q-method brought in an additional group of participants to help in the interpretation and prioritization of the qualitative data gathered in the initial interviews.

Focus group discussion were organized and conducted until thematic saturation was reached.

Key informant interviews and focus group discussions

A total of 8 key informant interviews and 17 focus group discussions were conducted to explore the health needs of Syrian refugees and the barriers facing them in obtaining health care, and to collect a variety of opinions and perceptions for subsequent by-person factor analysis. The average length of interviews was about 45 minutes. Key informant interviews involved key officials in the Jordanian Ministry of Health, the UNHCR main and camp-based offices, Jordan University for Science and Technology School of Medicine and Public Health, and international organizations such as the International Medical Corps.

Focus group participants included: 1) local Jordanian health care providers caring for Syrian refugees in Mafraq and Ramtha, 2) Syrian refugees in camps and 3) Syrian refugees in urban settings. Focus groups with Syrian refugees were stratified by gender, while groups with health care providers were mixed gender.

Interviews and focus groups were led by the primary investigator (TA) and conducted in Arabic (and audio recorded with permission) by the trained study authors using a semi-structured questionnaire (Box 1). Audio recordings were then transcribed into English, and the immersion/crystallization method was used (*11*). This involved 2 authors who independently read each transcript, while taking notes on emerging themes. Next, the authors met several times as a group to discuss data interpretation, potential biases and application of the findings to refugee health needs.

By-person factor analysis

By-person factor analysis was used to identify, evaluate and prioritize the views of Syrian refugees living outside refugee camps (*12*). This method has been successfully used to study perceptions of refugees on health issues in other parts of the world (*13*). Qualitative and quantitative methods are combined to identify groups called "respondent types" within a study population, to evaluate the degree of agreement among participants and identify conflicting opinions.

We first developed a collection of perceptions regarding the health of Syrian refugees through literature review and using our focus group discussions and key informant interviews. From this, we developed 45 statements representing the spectrum of ideas on the study topic. After refining and reducing these statements through processes of piloting, the final number of Q set statements was 23. Nine participants from Irbid and Kafrein were recruited for the pilot study to confirm

Box 1 Guide for focus group discussions (*n* = 8 interviews)

- What are the main health problems that Syrian refugees suffer from? What are the needs that are not addressed well?
- What are the sources of health care provided to Syrian refugees?
- What do you think of health care provided to Syrian refugees?
- Can you describe the health care provided to Syrian refugees in comparison to care provided for Jordanians?
- What are the strengths of the current Jordanian health care system in responding to the Syrian refugee crisis?
- What are the obstacles to providing health care to Syrian patients?
- What do you think are the solutions to alleviate the impact of the Syrian refugee crisis?
- What are the priorities in the improvement of health care services provided for Syrian refugees?
- What do you think would be the reaction of the health care community (physicians, nurses, administrators) to health care development? And the response of the public and the government?
- What types of training could be offered for the development of the refugee health care system?
- What can the global community do better to help with the Syrian refugee crisis?
- What strategies do you think are working well and what are not?

the accurate representation of the 23 statements. These statements were representative of the original perceptions and views about health needs provided by the members of the key informants interviews and focus groups discussions.

Respondents from community-dwelling Syrian refugees living in Irbid and Kafrein (2 governorates in Jordan with the largest Syrian refugee concentration) were recruited through a community-based organization that offers social activities (skills training, rehabilitation and recreational activities) for Syrian refugees living in the north of Jordan. Informed written consent was obtained from each participant. They were given the list of the 23 statements and asked to sort them into a semi-Gaussian, Q-sort grid, with the instruction, "Please sort these statements with respect to your opinion of the current health situation of Syrian refugees in Jordan." Each respondent ranked each of the 23 statements from −3 (strong disagreement) to +3 (strong agreement) and wrote each statement's corresponding number in an empty box in the grid.

Factor analysis was then done by the investigators on all completed grids, followed by automatic factor rotation using *PQMethod* 2.35 (*14*). To define and characterize the respondent types, all respondents who loaded heavily on a respondent type (> 50% concordance) were selected as respondent "loaders." The respondents who loaded heavily *and* specifically on a single respondent type (i.e. > 50% concordance on only a distinguishing position in a given factor) were designated respondent "definers" and examined carefully to characterize each respondent type. Individuals of the same respondent type expressed similar ideas that most of the data were converged around.

Ethical considerations

The study was approved by the Institutional Review Board of Partners HealthCare (Massachusetts General Hospital, Boston, USA) and the Jordanian Ministry of Health. In addition, UNHCR granted approval for qualitative studies conducted in the refugee camps.

Confidentiality was protected through using study codes, encryption of identifiable data, limiting access to data to only the study team and securely storing data.

Results

Discussions with health care providers and key informants

Four focus group discussions, 2 in Irbid/Ramtha (n = 40) and 2 in Marfaq (n = 40), and 4 key-informant interviews were conducted with health care providers, including physicians, nurses, and clinical social workers. The results from the focus group discussions with health care providers are presented in Table 1.

According to the health care providers and key informants, Syrian refugees primarily seek health care for acute conditions, including respiratory illness, fever, diarrhoea and injuries. Providers noted that the primary reason for reduced access to perinatal care was the lack of female physicians. Chronic conditions were common among older adults, including hypertension, cardiovascular disease, diabetes, chronic respiratory disease, arthritis and cataracts. Both key informants and health care providers identified cardiovascular disease as the main cause of mortality, and high rates of smoking were noted.

Jordanian health care providers caring for Syrian refugees reported feeling overworked, and were struggling to care for the growing numbers of Syrian refugee patients in understaffed and under-resourced clinics. These challenges contributed to staff burn-out. Providers also indicated that Syrian refugees preferred injections to oral medications and often questioned the quality of care received if a physician did not prescribe an injection.

Syrian refugees living in established refugee camps

Four focus group discussions were conducted with Syrian refugees in the largest refugee camps in Jordan: Zaatari Camp (2 focus groups, n = 60) and Azraq Camp (2 focus groups, n = 15). Table 2 shows the demographics of the participants. The results from the focus group discussions with Syrian refugees in refugee camps are presented in Table 1.

Participants identified the following obstacles to health and health care access: increased prevalence of smoking, unaffordable basic foods at unregulated local stores in the camps and lack of transportation from the camp to nearby clinics. Exacerbation of respiratory illness was attributed to living conditions in the desert. Early marriage and sexual abuse were also cited as concerns and as consequences of poverty and insecurity in the camps.

Recreational services for children, mental health clinics, vaccination awareness campaigns, and home visits by field officers to promote continuity of care for chronic diseases were described as health system strengths. Refugees in both camps noted that essential medicines for chronic diseases were unavailable in camp clinics and complained of long waiting times. Participants also perceived discrimination and inhumane attitudes among health care providers and suggested that Syrian physicians should be employed in the camps.

Syrian refugees living outside established refugee camps

A total of 13 focus group discussions with community-based Syrian refugees were conducted in Amman (n = 25), Ramtha (n = 22), Irbid (n = 45) and Mafraq (n = 18). Their demographics are presented in Table 2. The results from the focus group discussions with Syrian refugees living in the community are presented in Table 1.

Syrian refugee participants highlighted chronic conditions such as cardiovascular disease, diabetes, hypertension, cancer and kidney disease as important causes of illness, which they believed to be more prevalent since displacement. Poor housing conditions and poor

Table 1 Summary of qualitative findings (n = 185)

Themes	Concerns of health care providers and key informants	Concerns of Syrian refugees in camps	Concerns of Syrian refugees in urban areas
Health problems	• Syrian refugees primarily seek care for acute conditions (respiratory illness, fever, diarrhoea and injuries) • High prevalence of chronic conditions: e.g., hypertension, cardiovascular disease, diabetes, chronic respiratory disease, arthritis and cataracts. • High smoking prevalence • Lack of health literacy • Stigma around receiving mental health care • Lack of necessary documentation such as marriage and birth certificates	• Poor living conditions exacerbate respiratory illness • High costs of basic foods and unregulated stores in camps • Lack of transportation to health clinics inside the camp • Insecurity in the camps • Sexual abuse • Child marriage as a response to poverty and lack of security	• Limited health care access, especially secondary and tertiary care due to high costs and location • Chronic conditions perceived to be more prevalent since displacement, especially cardiovascular disease, diabetes, hypertension, cancer and kidney diseases • Mental illness, such as post-traumatic stress disorder and depression, are increasing in young adults • Lack of legal work opportunities and high costs of living and health care contribute to psychological distress and domestic violence • Poor housing conditions and poor water quality cause illness
Representative quotes	*We do not see many differences in the prevalence of chronic conditions between Syrian refugees and Jordanians. However, we see lower levels of health literacy, bad health behaviours, lack of trust and vulnerability for mental distress. There is a huge need for large-scale epidemiological studies.* – Jordanian physician	*Some grocery shop owners know that baby formula is not always available so they make sure to increase its price. I cannot afford it, and there is nobody to complain to. If you complain, they would return you to Syria.* – 35-year-old female refugee, Zaatari Camp *All my kids have asthma. All of them were born in Zaatari Camp which is located in the middle of the desert. When a sandstorm hits, they cannot breathe, and I see almost all kids of Zaatari in the emergency rooms of the 5 hospitals of the camp during sandstorm days.* – 42-year-old male refugee, Zaatari Camp *I have to marry off my daughters once they hit puberty. How can I pay for their food if I keep them in the same home with us?* – 46-year-old female refugee, Azraq Camp	*I do not know a single Syrian refugee in Jordan who does not have someone in the family with a chronic condition and is struggling to see doctors and buy medications. How can we afford all of this when we cannot work or do anything?* – 42-year-old male engineer and refugee, Irbid *We know that many Syrians have mental illness due to what they have witnessed during the war but who would marry a daughter of someone who sees a mental health doctor or takes medications to stay sane?* – 33-year-old male, jobless ex-teacher and refugee, Kafrein
Strengths and weaknesses of the Jordanian health care system	**Strengths:** • Providing free/subsidized care to Syrian refugees • Hospitality towards Syrian refugees • Dedication to providing quality health care to Syrian refugees and Jordanian citizens **Weaknesses:** • Lack of electronic health information systems, especially in primary care • Limited mental health care services • Insufficient health education programmes targeting chronic disease prevention, smoking, domestic violence and mental health stigma • Provider burn-out due to long work hours and staffing shortages • Lack of community health outreach programmes	**Strengths:** • Availability of primary health care facilities and small hospitals inside the camp • Recreational activities for children, such as after-school sports and art programmes • Mental health clinics run by International Medical Corps and other international organizations; vaccination awareness campaigns • Home visits by field officers for chronic diseases **Weaknesses:** • Periodic lack of essential medicines for chronic diseases, such as high blood pressure and diabetes • Long waiting times due to limited staffing in camp clinics • Discrimination and inhumane attitude of health care providers	**Strengths**: • Iris scan technology is a convenient way to access cash assistance **Weaknesses** • Cost is the primary barrier to health care access • High health care costs drive refugees to seek care in pharmacies instead of clinics • Discrimination in the health care setting and inhumane treatment from health care providers • Physicians perform insufficient physical examinations and do not spend enough time with patients • Legal status makes access to health services a challenge • Lack of birth certificates and changing UNHCR policies complicate health care access • Lack of access to dental care • Lack of female antenatal care providers • Hospitals that provide 24/7 emergency care are located far away • Current policies do not allow donation of blood among Syrians; thalassemia patients cannot access blood transfusions • Current policies do not allow Syrian health care providers to work while in Jordan

Table 1 Summary of qualitative findings (*n* = 185) *(concluded)*

Themes	Concerns of health care providers and key informants	Concerns of Syrian refugees in camps	Concerns of Syrian refugees in urban areas
Representative quotes	*We do not discriminate against Syrian refugees. In fact, we treat them better since they are our guests and that is part of our traditions and culture. They are more vulnerable and sensitive, and we are overworked.* – Jordanian physician, Zaatari Camp	*I wish they had more Syrian doctors to look after us instead of these Jordanian health care providers that threaten to kick us out of the country. My neighbour in the caravan next door is a talented Syrian surgeon, and I have gone to him when I cut my finger. He sewed my skin with a regular needle and thread.* – 55-year-old male refugee, Zaatari Camp	*I have a bad type of cancer in my thyroid gland. The hospital in Irbid covered the first session of my radiotherapy then they said I had to pay for the rest. I could not afford the rest of the treatment. My brother has asked friends and philanthropists on social media to donate money for my treatment.* – 59-year-old male refugee, Ramtha
Priorities and suggestions for change	• Increase health education programmes to address chronic disease prevention and smoking • Increase programmes to target mental health and mitigate stigma • Increase health programmes to address domestic violence • Increase the number of female antenatal providers to encourage use by Syrian refugees	• Syrian physicians should be employed in the camps • Provide transportation to hospitals and health clinics inside the camp • Regulate food and grocery stores inside the camp	• Increase the quantity and quality of food coupons and ensure that they are accepted at stores accessible to refugees • Revisit cash assistance criteria • Train health care providers to care for the vulnerable refugee population • Provide adequate care and health education for chronic conditions • Increase numbers of female physicians caring for Syrian refugee women • Increase legal work opportunities, and facilitate registration of marriage and births in order to improve quality of life and health care access for Syrian refugees

Table 2 Demographic information on refugee focus group participants (*n* = 185)

Area	Amman	Ramtha	Irbid	Mafraq	Zaatari Camp	Azraq Camp
No. of participants	25	22	45	18	60	15
Mean age (SD) (years)	42 (4)	36 (2)	27 (9)	25 (7)	38 (9)	21 (8)
Sex: No. (%)						
Female	15 (60)	19 (86)	20 (44)	11 (61)	28 (47)	6 (40)
Male	10 (40)	3 (14)	25 (56)	7 (39)	32 (53)	9 (60)
Mean no. of years since displacement	3.5	3.0	3.5	2.5	3.0	1.0

SD = standard deviation.

water quality were described as sources of illness. A lack of legal work opportunities and high costs of living and health care were intertwined with health problems and identified as a cause of psychological distress, which reportedly contributed to domestic violence.

UNHCR cash assistance programmes were the most frequently raised topic in focus group discussions with Syrian refugees. Refugees approved of iris scan technology, which enables refugees to access cash without a card or PIN. However, they questioned the UNHCR beneficiary selection criteria for cash assistance, arguing that recipients were better off than the destitute majority who were denied it.

Cost was the primary barrier to health care identified by Syrian refugees living outside refugee camps. This drove them to seek care in pharmacies and to ask pharmacists to diagnose diseases and prescribe medications, making pharmacies their primary source of health care. Medical facilities with 24-hour emergency services were far away from refugee homes. Refugees complained of discrimination in the health care setting and inhumane treatment from health care providers, and they perceived that physicians performed insufficient physical examinations. Legal status and livelihoods were also described as barriers to health care, including a lack of birth certificates and changing UNHCR policies.

By-person factor analysis results

Of the 44 Syrian refugees invited to participate in the factor analysis exercises, 34 completed them correctly (77.3% response rate). Respondents were all community-dwelling Syrian refugees living in Irbid and Kafrein areas. The mean age was 29.2 (standard deviation 9) years (range: 18–65), and 52.9% of the participants were females.

Table 3 shows the Syrian respondents' perceptions of their health situation in Jordan in the by-person factor analysis. The average level of agreement for all participants and the agreement levels by respondent type are given. In some cases, notable agreements or

Table 3 Syrian refugees' perceptions of their health situation in Jordan (n = 34)[a]

Statements for by-person factor analysis (listed from greatest consensus to least consensus)	Averaged level of agreement for all participants	Agreement levels by respondent type			
		Type 1 (32% of participants)	Type 2 (14% of participants)	Type 3 (14% of participants)	Type 4 (9% of participants)
Syrian refugees are open to the idea of receiving mental health services	−0.05	−1	−1	−1	−2
Not having female doctors is a reason why many female Syrian refugees refuse to seek care	0.82	1	0	1	1
Health care would not improve if the ministry of health had better trained and qualified doctors	0.09	0	−1	0	1
Cardiovascular disease is a major cause of death in Syrian refugees	−0.50	−1	0	1	1
I do not feel discrimination or inhumane attitude from the health care providers	−1.27	−1	0	1	0
Health would improve if refugees had more food	0.46	1	2	0	2
Training Jordanian doctors on humanitarian crises will not improve health care services offered to refugees	0.18	0	−1	−2	0
Patients are adequately prescribed the medicine they need	−0.09	0	1	−1	−1
The UNHCR needs to develop better standards for who gets the iris scan[b] and this will improve health care access	2.41	3	1	3	3
Chronic diseases are well cared for at the governmental hospitals	−0.68	−2	0	0	0
Local pharmacies often have the medicines that doctors prescribe	−0.59	−2	1	0	0
Allowing Syrian doctors to practise medicine will not improve the health status of Syrians	0.23	2	1	2	−1
If I have an emergency at night I can see the doctor quickly	−1.78	−2	0	−1	−3
Giving injections is an important indicator of a good health care centre and good doctors	−1.05	−3	−3	0	−1
Patients with complicated conditions do not have to travel long distances to find the appropriate doctors	0.64	1	−2	1	0
Smoking is very common among Syrian refugees, males and females	−0.68	0	−2	2	−2
Offering children fun programmes is important for their mental wellbeing	0.64	2	2	−2	2
If Syrians were allowed to work legally, the health status of most of them would improve significantly	1.73	3	3	3	−1
Free medical days offer great services	−0.82	−3	2	−1	1
Domestic violence is a phenomenon that could benefit from community awareness programmes	−0.41	−1	−3	−2	2
The poor quality of the water causes many health problems	−0.05	1	−1	2	−3
Quality school education is lacking and causes mental health problems	0.14	0	−2	−3	3
Allowing Syrian refugees living in Jordan to visit their families in Syria and return will significantly improve their mental health	0.91	2	3	−3	−2

[a] *Participants were invited to sort 23 statements by level of agreement. Agreement levels were given from "I strongly disagree" (−3), "I feel ambivalent/neutral" (0), or "I strongly agree" (+3). The responses were averaged and also analysed with by-person factor analysis to reveal 4 respondent types. Not all the participants matched sufficiently any of the 4 respondent types (they were composites across the respondent types), and were therefore not classified.*

[b] *The iris scan is a UNHCR needs-based cash assistance programme offered to only the most vulnerable refugees. It uses iris scan technology at certain banks in Jordan to enable refugees to access their UNHCR funds without the need for a bank card or PIN code.*

disagreements were found among the 4 respondent types. Table 4 shows the distinguishing statements for each of the 4 respondent types.

All respondent types agreed to some extent that UNHCR should revisit beneficiary selection criteria for cash assistance (the iris scan cash programme). Almost

Table 4 Distinguishing statements for each of the 4 respondent types and the differing levels of agreement of each respondent type (*n* = 34)

Statement	Level of agreement							
	Type 1	Z-score	Type 2	Z-score	Type 3	Z-score	Type 4	Z-score
Respondent type 1								
Quality school education is lacking and causes mental health problems	0	0.31*	2	−1.14	−3	−1.71	3	−1.71
Local pharmacies often have the medicines that doctors prescribe	−2	−1.03	1	0.57	0	0	0	0
Chronic diseases are well cared for at the governmental hospital	−2	−1.27*	0	0	0	0	0	0
Free medical days offer great services	−3	−1.43*	2	1.14	−1	−0.57	1	0.57
Respondent type 2								
The UNHCR needs to develop better standards for who gets the iris scan and this will improve health care access	3	1.98	1	0.57	3	1.71	3	1.71
The poor quality of the water causes many health problems	1	0.67	−1	−0.57	2	1.14	−3	−1.71
Patients with complicated conditions do not have to travel long distances to find the appropriate doctors	1	0.64	−2	−1.14	1	0.57	0	0.00
Respondent type 3								
Smoking is very common among Syrian refugees, males and females	0	−0.32	−2	−1.14	2	1.14*	−2	−1.14
Free medical days offer great services	−3	−1.43	2	1.14	−1	−0.57	1	0.57
Offering children fun programmes is important for their mental wellbeing	2	1.01	2	1.14	−2	−1.14*	2	1.14
Respondent type 4								
Quality school education is lacking and causes mental health problems	0	−0.31	−2	−1.14	−3	−1.71	3	1.17*
Domestic violence is a phenomenon that could benefit from community awareness programmes	−1	−0.94	−3	−1.71	−2	−1.14	2	1.14*
If Syrians were allowed to work legally, the health status of most of them would improve significantly	3	1.61	3	1.71	3	1.17	−1	−0.57*
Allowing Syrian doctors to practise medicine will not improve the health status of Syrians	2	0.90	1	0.57	2	1.14	−1	−0.57
The poor quality of the water causes many health problems	1	0.67	−1	−0.57	2	1.14	−3	−1.71

**Significant at P < 0.01.*

all the participants also agreed that increasing legal work opportunities for Syrian refugees would improve their health. Participants tended to believe that stigma was a barrier to access of mental health resources. Most participants also complained that 24-hour emergency services were difficult to access.

Respondent type 1 was heavily loaded by 21 respondents (61.8% of participants) and defined by 11 (32.4%), while each of the remaining 3 types included 2 loaders (5.9%) and 1 definer (2.9%). Respondent type 1 generally emphasized the importance of policy changes to improve Syrian refugee health, including increasing work opportunities, permitting refugees to visit family members in Syria, and increasing recreational programmes for children. Although according to this respondent type most of these needs were not met, they were ambivalent about the need to train local doctors on refugee health issues, prescribing adequate drugs to patients, smoking cessation efforts and providing good quality school education.

Individuals in respondent type 2 emphasized the importance of access to fresh foods and recreational activities for children. They also supported policies to increase legal work opportunities for Syrians and to permit Syrians to visit family in Syria and return to Jordan. This respondent type believed that Jordanian health care providers were qualified and felt that medicines were available and patients were prescribed the medicines they needed.

The poor quality drinking water that reportedly causes health problems was the primary concern that characterized respondent type 3. The fourth respondent type believed that high quality, free education was lacking

for Syrian children and this exacerbated their mental health problems. They supported expanding recreational programmes for youth and social interventions to address domestic and sexual abuse.

Discussion

Health care providers and Syrian refugees highlighted the high burden of chronic disease in this population, which is consistent with the World Health Organization data from Syria (*15*) and studies regarding Syrian refugees (*16–20*). Participants also identified the high smoking prevalence among Syrian refugees as a major contributor to the increase in chronic conditions. These findings suggest relief efforts should increase emphasis on the prevention and management of chronic diseases in order to tailor the response to the burden of disease in this population (*21,22*).

Many of the Syrian refugee participants expressed that the lack of transportation was an issue when trying to access care, especially for after-hour emergencies. Also, the changing policies about which clinics and hospitals offer subsidized care for Syrian refugees affected access to care.

Livelihoods

Financial problems emerged as a central theme in focus groups with refugees. Refugee participants questioned the UNHCR beneficiary selection criteria through which only 23 000 Syrian families, a small percentage of the Syrian population in Jordan, receive aid (*23,24*). As seen in this study, access to food, medicines and free education was a concern of the majority of the participating Syrian refugees in Jordan. As the Syrian crisis persists, displaced Syrian families are exhausting their savings and becoming even more vulnerable (*25*). Employment for Syrian refugees in Jordan and across the region would help them meet their own needs, as well as restore their dignity and mitigate some of the social tensions with host populations (*25*).

As reported in the focus group discussions, cost was the primary barrier to accessing care. This situation is similar to other neighbouring countries hosting Syrian refugees such as Lebanon and Turkey (*22,26*). According to refugees in both camp and urban settings, it is particularly difficult to access secondary or tertiary care, as previously described in the literature (*27*). The limited ability to work legally – due to the restricted number and high cost of work permits – is a great threat to livelihoods. Migrant families reported coping with this situation by working illegally, such as women cooking at home and selling food or men working in construction. While limited resources necessitate prioritization, the policy to only cover hospitalization or tertiary care for life-threatening illnesses may ultimately lead to increased future health costs. High costs also prompt Syrian refugees to seek care from pharmacists, which may leave chronic conditions uncontrolled and even promote antimicrobial resistance (*28*). All discussions with health care providers, key informants and refugees revolved around the need to facilitate and allow for a larger number of refugees to work legally in Jordan.

Differences between refugees living inside versus outside refugee camps

Refugees living outside of camps emphasized financial constraints to health care access, attributing their limited financial resources to their inability to work legally. This is consistent with findings from other studies in Jordan (*27*) and among refugees worldwide (*29*), as urban refugees must often make difficult decisions between housing, health care and basic necessities. Meanwhile, camp-based refugees emphasized living and security conditions in the camps as major concerns and mentioned domestic and sexual violence more than their counterparts living in urban areas. Security concerns and poverty in the camps were cited as reasons for increased rates of early marriage. Employment of Syrian doctors to care for patients in the camps may simultaneously ease the burden on Jordanian physicians while providing employment opportunities for this specific group of Syrians (*30*).

During the focus group discussions, many Syrian refugee participants welcomed mental health services and emphasized financial concerns as a primary source of stress. Psychological stress was also identified as a driver of domestic violence. Participants emphasized recreational activities for children were important for their mental health. Health care providers and participants in the Q-method felt that community education programmes were needed to combat mental health stigma and develop more effective and acceptable interventions.

Jordanian health care providers

Discussions with health care providers and key informants from UNHCR, the Jordanian Ministry of Health and nongovernmental organizations underscored the need for health education services targeting smoking cessation, chronic disease risk prevention and management, and mitigating mental health care stigma. In contrast to Syrian refugees who described experiences of discrimination or inhumane treatment even at times in health care settings, Jordanian health care providers emphasized the hospitality with which Syrian refugees were received in the health care system. A growing body of quality improvement literature demonstrates that patients are more likely to comply with treatment if their interaction with a health care provider is positive (*31*). Thus, patient perceptions of clinician attitudes will likely have concrete public health consequences and should be prioritized.

Study limitations

All the participants were recruited by convenience sampling, which may limit the representativeness of the study sample and the generalizability of our findings. Locating and recruiting Syrian refugees living in urban areas is a complex and lengthy process as they frequently migrate throughout the country searching for work.

Individuals with strong opinions about health care and with health needs may have been more likely to participate. Nevertheless, our study sampled groups in diverse geographical areas with the highest concentration of Syrian refugees in Jordan.

Conclusion

This study integrated qualitative and quantitative methodologies to present the priorities of Syrian refugees, key stakeholders and Jordanian health care providers related to the health of refugees in Jordan. All parties emphasized chronic disease and mental health as the main problems facing this population. Syrian refugees identified cost as the most significant barrier to health care access, seeing increased livelihood opportunities as a potential solution to this problem. Perceived unfair aid distribution, discrimination and tensions with host communities were common complaints of Syrian refugees that reportedly adversely affected their health.

Local and international policies concerned with refugee health could benefit from these findings and from this multilayered approach to prioritizing needs. Future research exploring refugee coping mechanisms could be conducted. This study may also lay the foundation for further research on approaches to most effectively address refugee social, clinical and public health needs.

Funding: None.

Competing interests: None declared.

Besoins et priorités sanitaires des réfugiés syriens dans les camps et en milieu urbain en Jordanie : perspectives des réfugiés et des prestataires de soins de santé

Résumé

Contexte : Les Nations Unies ont déclaré la crise des réfugiés syriens comme étant la plus importante situation d'urgence humanitaire de notre ère. Les pays voisins, comme la Jordanie, s'efforcent péniblement de répondre aux besoins sanitaires des réfugiés en plus de leurs propres citoyens, du fait des ressources limitées.

Objectifs : La présente étude visait à déterminer les perspectives des réfugiés syriens en Jordanie, des prestataires de soins de santé jordaniens et d'autres parties prenantes en prenant en compte les questions de santé publique liées à la crise des réfugiés.

Méthodes : Des méthodologies qualitatives et quantitatives ont été utilisées pour explorer les besoins sanitaires des réfugiés syriens et les services de santé qui leur sont destinés dans les camps et en milieu urbain en Jordanie. Des groupes de discussion et des entretiens auprès des principaux informateurs ont été utilisés pour identifier les besoins, les défis et les solutions potentielles afin de fournir des soins de santé de qualité aux réfugiés. L'analyse factorielle par individu a divisé les participants réfugiés en quatre types uniques de répondants et a comparé les priorités pour les interventions.

Résultats : Les discussions de groupes et les entretiens avec les principaux informateurs ont mis en évidence de nombreux problèmes différents. Le coût, les ressources limitées, les changements de politiques, les moyens de subsistance et les faibles connaissances en matière de santé venaient entraver la prestation de services de santé publique et clinique. Les répondants de type 1 soulignaient l'importance des changements de politiques pour améliorer la santé des réfugiés syriens. Ceux du type 2 ont mis en évidence l'accès à des aliments frais et aux activités récréatives pour les enfants. Pour le type 3, la mauvaise qualité de l'eau de boisson était la principale préoccupation, et le type 4 pensait que l'absence de bonne éducation, gratuite, pour les enfants syriens exacerbait leurs problèmes de santé mentale.

Conclusions : Les réfugiés syriens ont identifié le coût comme obstacle principal à l'accès aux soins de santé. Les réfugiés tout comme les prestataires de soins de santé ont souligné l'importance d'attribuer davantage de ressources aux maladies chroniques et à la santé mentale.

الاحتياجات والأولويات الصحية للاجئين السوريين في المخيمات والمناطق الحضرية في الأردن: وجهات نظر اللاجئين ومقدمي الرعاية الصحية

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الخلاصة

الخلفية: أعلنت الأمم المتحدة أن أزمة اللاجئين السوريين تشكل أكبر حالة طوارئ إنسانية في العصر الحالي. وتتحمل البلدان المجاورة، مثل الأردن، ضغوطاً من أجل تلبية الاحتياجات الصحية للاجئين السوريين فضلاً عن مواطنيها في ظل شح مواردها.

الأهداف: تمثل الهدف من هذه الدراسة في تحديد وجهات نظر اللاجئين السوريين في الأردن، ومقدّمي الرعاية الصحية الأردنيين، وسائر أصحاب المصلحة في التصدي لقضايا الصحة العامة المرتبطة بأزمة اللاجئين.

طرق البحث: استخدمت منهجيات بحثٍ كمية وكيفية لاستكشاف الاحتياجات الصحية للاجئين السوريين والخدمات الصحية المتاحة في المخيمات والمناطق الحضرية في الأردن. وأجريت مناقشات جماعية مركّزة ومقابلات مع مستجيبين رئيسيين لتحديد الاحتياجات والتحديات والحلول المحتملة لتوفير رعاية صحية ذات جودة للاجئين. وأجري تحليل عوامل شخصي أدى إلى تقسيم المشاركين اللاجئين إلى ٤ أنواع فريدة من المستجيبين ومقارنة أولويات التدخل.

النتائج: كشفت المناقشات الجماعية المركّزة والمقابلات التي أجريت مع المستجيبين الرئيسيين عن مشكلات كثيرة ومختلفة. وتبيّن أن ارتفاع التكلفة ونقص الموارد وتغير السياسات وسبل العيش وضعف الإلمام بأساسيات المعرفة الصحية تعوق توفير الخدمات الصحية العامة والسريرية. وأكد النوع الأول من المستجيبين أهمية تغيير السياسات لتحسين صحة اللاجئين السوريين. وأبرز النوع الثاني أهمية الوصول إلى الأغذية الطازجة والأنشطة الترفيهية للأطفال. في حين أشار النوع الثالث إلى أن الشاغل الأساسي هو ضعف جودة مياه الشرب، ورأى النوع الرابع أن الافتقار إلى التعليم الجيد والمجاني للأطفال السوريين يؤدي إلى تفاقم مشكلات الصحة النفسية لديهم.

الاستنتاجات: حدد اللاجئون السوريون التكلفة باعتبارها العائق الرئيسي الذي يحول دون الوصول إلى الرعاية الصحية. وأكد اللاجئون ومقدمو الرعاية الصحية على حدٍ سواء أهمية توجيه مزيد من الموارد لعلاج الأمراض المزمنة ومشكلات الصحة النفسية.

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