A SYSTEMATIC REVIEW TO IDENTIFY KEY ELEMENTS OF EFFECTIVE PUBLIC HEALTH INTERVENTIONS THAT ADDRESS BARRIERS TO HEALTH SERVICES FOR REFUGEES

Abstract

Aim: Refugees often face barriers to accessing health services especially after resettlement. The aim of this study is to identify key elements of effective public health interventions that address barriers to health services for refugees.

Methods: Key online databases were searched to identify studies published between 2010-2019. Six studies met the inclusion criteria; two qualitative, one quantitative and three mixed-method studies. An adapted narrative synthesis framework which included thematic analysis for systematic reviews was used.

Results: Five themes were identified: peer support, translation services, accessible intervention, health education and a multidisciplinary approach.

Conclusion: These key elements identified from this review could be incorporated into public health interventions to support refugees' access to health services. They could be useful for services targeting refugees generally, but also supporting services targeting refugee resettlement programmes for example the Syrian resettled refugees in the UK. Future research is needed to evaluate the impact of public health interventions where these elements have been integrated into the intervention.

Keywords: Refugee, Health service, Public health intervention, Access to health services, barriers to health services

Introduction

There is a growing concern about the health of the increasing numbers of refugees across the world (Abbas et al. 2018; UNHCR 2017) and international research suggests that they can experience barriers to accessing health services in their host countries (McKeary and Newbold 2010; Kohlenberger et al. 2019; Morris et al. 2009; Vermette et al. 2015; Mirza et al. 2014; Thomson et al. 2015; Bhatia and Wallace 2007; McMurray et al. 2014; Lebano et al. 2020). Refugees are a particularly vulnerable population who often experience underlying poor health (Devakumar et al. 2015; El-Khatib et al. 2013) and it is essential that they receive good quality health care to prevent an exacerbation of this. A refugee has been forced to

leave their home in order to escape war or persecution (UNHCR 1951) and in 2018, around 70.8 million people across the world had been forcibly displaced (Refugee Council 2019). At the end of 2018, the number of refugees in Europe increased to 32% (nearly 6.5 million refugees) of the total number of refugees (Refugee Council 2019), many of whom were from major conflict areas; Syria, Afghanistan and South Sudan (Refugee Council 2019; UNHCR 2018). The European Charter of Fundamental Rights states that everyone has the right to access health care (EU Commission 2012). However, while this right is incorporated into both international and European law (Rechel et al. 2013), in reality refugees often face barriers to accessing health services (O'Donnell et al. 2016; UNICEF 2017; Lebano et al. 2020). International evidence has classified these barriers on three levels, individual, institutional and system levels (McKeary and Newbold 2010; Kohlenberger et al. 2019; Morris et al. 2009; Vermette et al. 2015; Mirza et al. 2014; Thomson et al. 2015; Bhatia and Wallace 2007; McMurray et al. 2014; Lebano et al. 2020). Using the evidence base, we constructed Figure 1 as a visual aid to barriers at different levels. It is important to consider all three levels when developing public health interventions to support refugees' access to health services.

In the UK, some refugees are people who have been granted asylum following their independent arrival; others are people brought here through resettlement programmes including the Syrian Vulnerable Persons Resettlement [SVPR] scheme. This scheme resettles the most vulnerable individuals and families from refugee camps where they may have survived torture and violence and have complex health needs (GOV.UK 2017). Resettled Syrian refugees have the right to access health care but may face additional barriers to this, if they are resettled in areas where traditionally there has been little ethnic diversity and therefore a lack of appropriate intervention in place to support their access to health services (Bhatia and Wallace 2007; Refugee Council 2016).

It is essential that refugees can access health services to address their complex health needs and new interventions need to be developed to support this. Intervention development needs to be informed by the best available evidence and it is important to understand what has made previous interventions successful in supporting refugees' access to health care. Consequently, a search of systematic reviews was undertaken. Two relevant reviews were found. One related to training of health professionals (Chiarenza et al. 2019) and the other scoping review identified best practices and tools in developing community-based health care for migrants and refugees (Riza et al. 2020). This review reported best practice principles for developing

community-based health care such as ensuring good communication, but not how good communication could be achieved. No studies could be found synthesising research around the actual successful elements of an intervention to achieve best practice in addressing refugees' barriers to health service access at an individual level such as language, cultural, knowledge and financial barriers.

This paper reports on a systematic review that was undertaken to address the following question:

> What are the key elements of effective interventions that address barriers to health services in refugees?

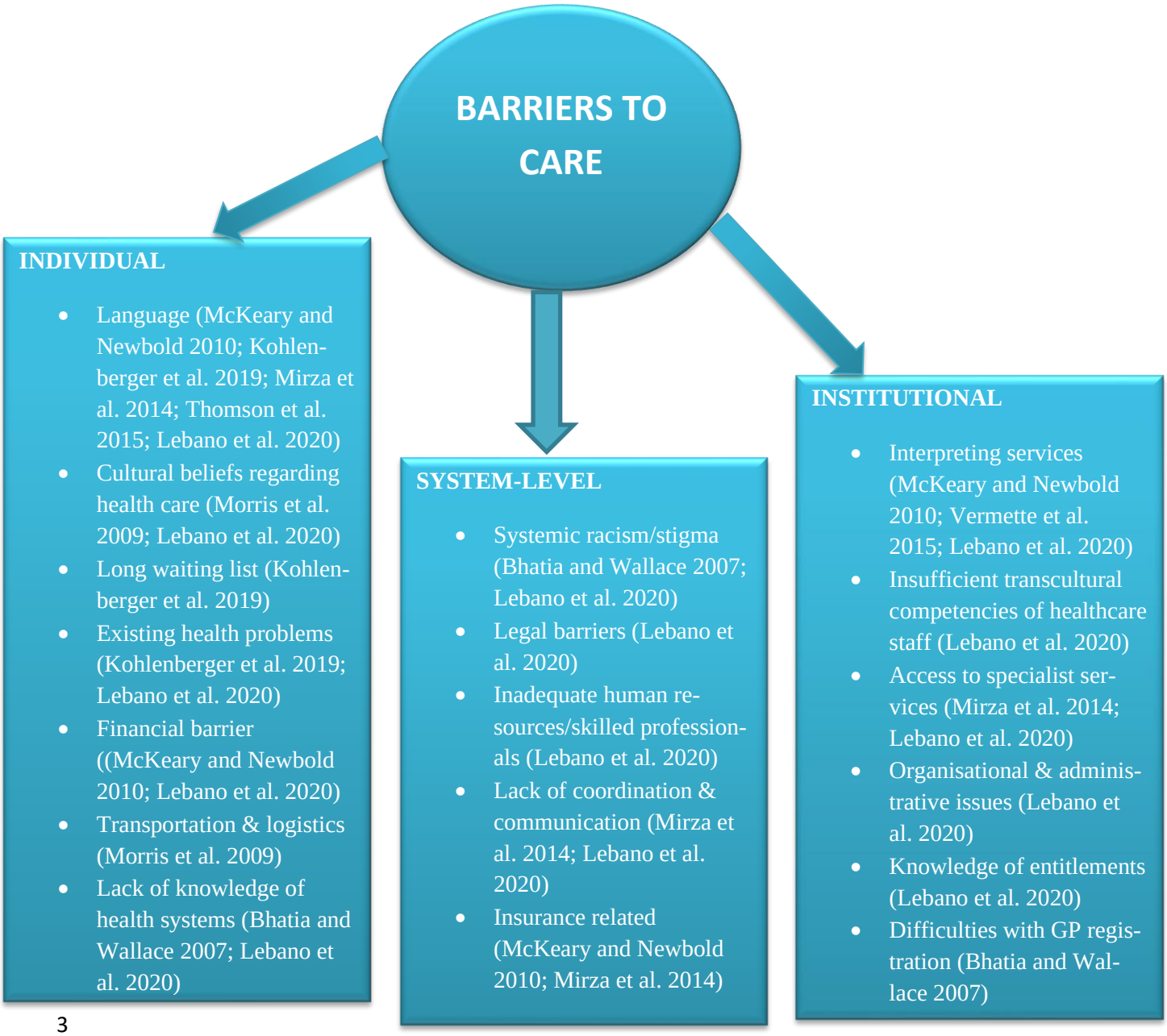

Fig. 1 Levels of barriers to refugees accessing health services

Methods

A systematic review was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses [PRISMA] guidelines to improve the quality and transparency of the review (Moher et al. 2009). Databases searched were MEDLINE, Cochrane, CINAHL, SCOPUS, EMBASE, Journals in Migrant Health, Prospero and Epistemonikos. The following search terms were used in the titles, abstract and keywords: ("Refugees" OR "refugee*") AND ("access*" OR "Health Services Accessibility+") OR ("barrier*" OR "challenge*") AND ("health service*" OR "Health Services+" OR "health care" OR "Health Services Needs and Demand+") AND ("intervention*" OR "program*") AND ("Public Health+" OR "public health"). The "explode" option was used to increase the depth of the search. A grey literature search was performed using Google scholar and Nice Evidence Search, and a snowballing search of the reference lists of all the studies included was undertaken (Gough et al. 2017; Boland et al. 2017). The electronic searches included English language articles published between 2010 and 2019, thus including the most recent studies. This is essential because the context of refugees and healthcare services changes with time and so the barriers to health services might also change.

The review included peer reviewed qualitative, quantitative and mixed method studies that specifically focused on elements of effective interventions that address barriers to health services for refugees. In this review, the sample was limited to refugees who have been granted recognised refugee status and therefore are permitted to continuing living in the country. This is in contrast to asylum seekers, who may face different barriers to those faced by refugees such as not being entitled to access health services and having to pay for those services (Aspinall and Watters 2010). Understanding the heterogeneity between refugees and asylum seekers is essential especially when providing healthcare services because their different experiences and situations may affect their care needs (Gilbert 2017). Only studies focused on refugees in high income countries were included because the healthcare systems are different from those in the refugee's home countries. Therefore, the barriers to health services would also be different. Excluded in this review was literature that involves mixed migrant populations, resettlement in low income countries and ongoing studies. Studies involving mixed migrant populations were excluded because of the complexities in defining the different migrant terms which could affect comparisons and analysis (Lebano et al. 2020; Riza et al. 2020), and therefore makes it difficult to draw conclusions and generalise the findings (Lebano et al.

2020). Also, refugees in contrast to other migrants such as economic migrants may face different barriers because of their varying experiences and situation.

Titles and abstracts were independently screened and full text copies obtained and assessed using the inclusion and exclusion criteria. From 13 full text potentially relevant papers screened, six papers were included in the review (Figure 2). The first author MJ independently conducted the searches, extractions, and analysis with the help of two supervisors MC and JH who examined a random sample of about a third of the included studies. The six included studies consisted of two qualitative, one quantitative and three mixed-method studies. Discrepancies in decisions between the authors were resolved through mutual agreement.

PRISMA 2009 Flow Diagram

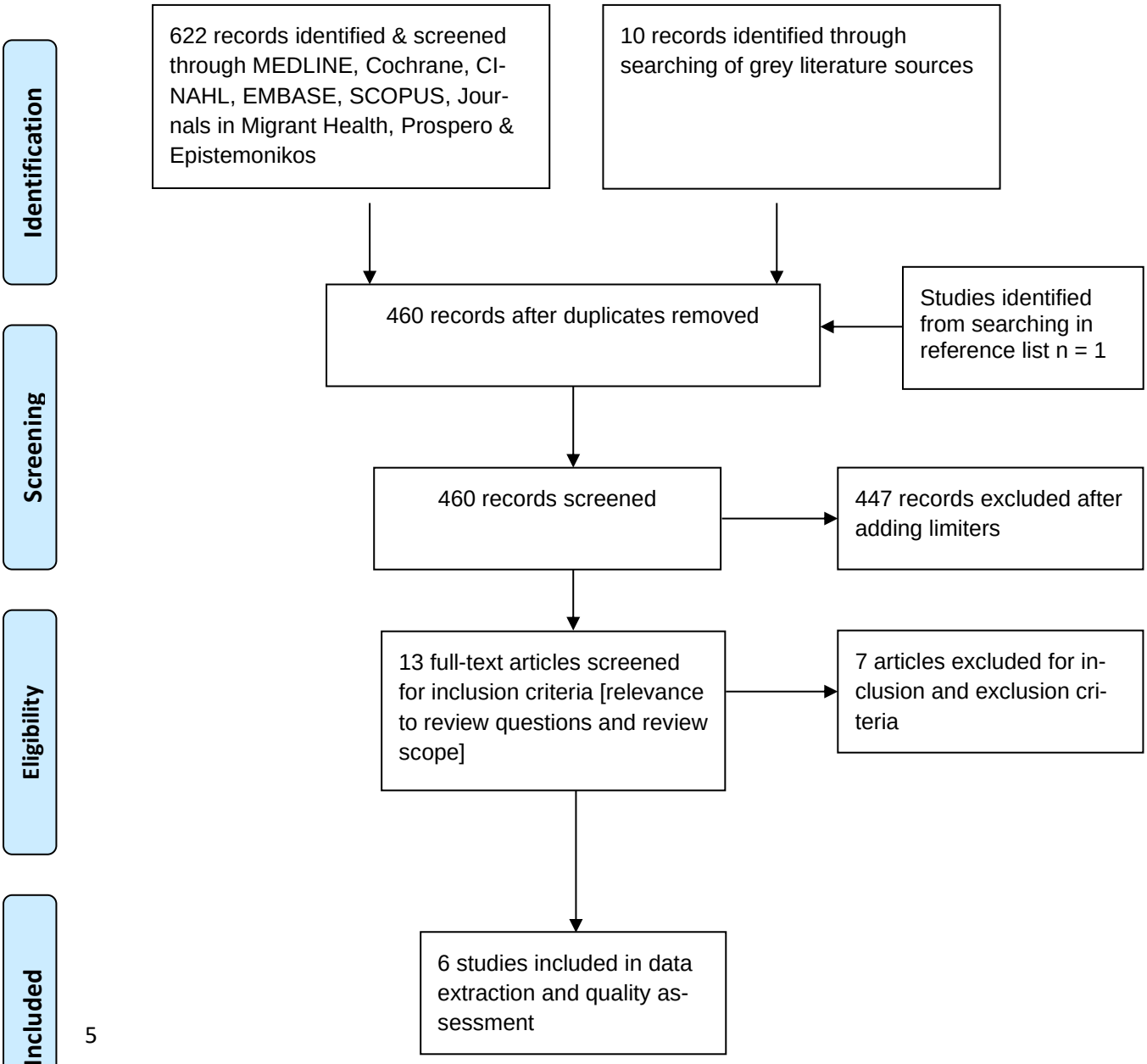

Fig. 2 PRISMA flow chart of study selection process (Moher et al. 2009)

This was undertaken using a validated tool with scoring criteria designed for methodologically diverse studies (Sirriyeh et al. 2012). This ensures a reliable method is used to critically appraise studies in a standardised way (Greenhalgh 2014). The tool consists of 16 quality criteria; 14 applied to qualitative studies, 14 for quantitative studies and all 16 applied to the mixed method studies. A four-point scale (0-3) is used to assess quality. The maximum score was 48 for mixed method studies, and 42 for qualitative or quantitative studies (Sirriyeh et al. 2012). The overall score for each paper is expressed as a percentage of the maximum possible score. A limitation of this tool was that some of the criteria were not always applicable due to the nature of the research in some studies. For instance, it posits that all studies must have an explicit theoretical framework and a research question, which were not indicated in some of the studies. Three of the studies were identified as poor quality studies (Table 1) (McMurray et al. 2014; Reavy et al. 2012; Borgschulte et al. 2018), which were not excluded because they provided valuable contributions to the synthesis (Boland et al. 2017).

Table 1 provides an overview of the quality assessment scores for each individual study in order of decreasing quality.

Table 1 Quality assessment scores

Paper No.	Study	Quality Scores (%)
1	Im and Rosenberg 2016 (Qualitative)	61.9
2	Im 2018 (Qualitative)	59.5
3	Yun et al. 2016 (Mixed Method)	54.2
4	McMurray et al. 2014 (Quantitative)	40.5
5	Reavy et al. 2012 (Mixed Method)	29.2
6	Borgschulte et al. 2018 (Mixed Method)	29.2

Data relating to study characteristics, methods, findings and quality were extracted using standardised data extraction forms to allow for synthesis of information and to identify key themes across studies. Data from the qualitative studies were extracted using a validated NICE qualitative data extraction form (British Psychological Society 2007) and quantitative study data were extracted using the form from the Centre for Reviews and Dissemination (University of York NHS CRD 2009). These two forms were modified to extract data from the mixed method studies. The data extraction forms were piloted using two of the included studies to help identify missing or superfluous data on the forms and to ensure that the data extracted are relevant to the review question (Boland et al. 2017). A narrative synthesis framework described by Popay et al. 2006 was adapted to analyse the data. This included the use of thematic analysis for systematic reviews to help identify systematically the commonalities or recurrent themes relevant to the review question across all the included studies. This was conducted through reading and re-reading of the papers and applying line-by-line coding of text to capture descriptive themes relevant to the review question (Thomas and Harden 2008). Themes were collapsed where there is redundancy or overlapping and then split when necessary to improve their conceptual clarity (see Table 3) (Gough et al. 2017; Thomas and Harden 2008).

Results

Table 2 provides a summary of the included studies. They were conducted in the US (Reavy et al. 2012; Im and Rosenberg 2016; Im 2018; Yun et al. 2016), Canada (McMurray et al. 2014), and Germany (Borgschulte et al. 2018). A total of 124 participants were studied; 79 were refugees, 21 peers and 24 care providers: doctors, nurses and social workers. Three of the studies focused exclusively on Bhutanese refugees from refugee camps in Nepal (Im and Rosenberg 2016; Im 2018; Yun et al. 2016), while two of the studies concentrated on refugees from Middle East, Far East, Asia and Northwest Africa (McMurray et al. 2014; Reavy et al. 2012). One study focused on refugees from Western Balkan countries (Albania, Bosnia, Kosovo, Macedonia, Montenegro, and Serbia) and Syria (Borgschulte et al. 2018).

Table 2 Summary of the included studies

Paper no.	Author	Methodology / Study design	Aims of study	Setting	Main Findings
1	Im and Rosenberg 2016	Qualitative (Focused Group)	Used a social capital framework to assess the impact of a peer-led intervention in a refugee community	Bhutanese refugee community in Greater Richmond area of Virginia	- Culturally sensitive peer-based model with the refugee community was the key element of success - The participants reported improvement in health knowledge and competence in coping with health concerns - Improvement in healthy behaviours - Refugees reported improved mental and emotional wellbeing - It promoted independence or self-help skills and community building
2	Im 2018	Qualitative (Focused Group with semi-structured interview)	Ecological framework was used to explore the impact of community-based health education for refugees resettled in the community	Bhutanese refugee community in Greater Richmond area of Virginia	Themes developed from the codes were: - Health capital at individual level – These included improvement in health knowledge and awareness; coping skills; improved help seeking behaviour and socialising. - Health capital at family level – Health promotion at family level; Preserving cultural practice within families and improved family relationships - Health capital at community level – Preserving cultural practice in the refugee community through peer-led interventions; Peer support also helped improve access to healthcare and promoted mutual support.
3	Yun et al.	Qualitative	To assess the barri-	Bhutanese	- Changes in self-efficacy (patient activation levels): Prior to the intervention, many

	2016	(different interview tools: surveys, semi-structured, questionnaire)	ers to care, help-seeking behaviours, and the impact of a community-based patient navigation intervention on patient activation levels	refugee community in Philadelphia	clients reported low levels of patient activation (68.6 %) and only a few were highly activated (5.7 %). After enrolling to the program, only one-third reported the lowest level of activation (35.3 %) and one-third were highly activated (32.4 %) - Improved help-seeking behaviour - Patient Navigation: provided benefits for the peer facilitators, allowing them to help their family members and also contributing to professional development. Improved access to healthcare for the service users was reported
4	McMurray et al. 2014	Quantitative (Repeated Survey Study design)	Is to quantify the impact of a refugee health clinic on Government Assisted Refugee's (GAR) access to services such as clinic wait times, access to specialist & allied health services	Refugees in South-Western Ontario town of Kitchener	- The waiting times to see a health care provider was reduced by 30 % - In the first year of their arrival, there was 18% increase in refugees finding a permanent family doctor in the community - Understanding of the healthcare system was higher among people who accessed the clinic (35%) compared to those without clinic access - The probability of refugees being referred to physician specialists decreased by 45 % as a result of seeing a refugee health clinic physician (OR = 0.55; p = 0.004)
5	Reavy et al. 2012	Mixed Method Study (Qualitative data col-	to describe and differentiate the roles of health advisor and	Refugee women employed as	A new clinic model for prenatal and paediatric refugee patients was established. Success of the model was largely due to the role of C.A.R.E. (Culturally Appropriate Resources and Education) Clinic Health Advisor:

		lected from observations, focus groups, interviews & Quantitative data collected from retrospective chart reviews)	certified medical interpreter (CMI)	C.A.R.E clinic health advisors living in Boise, Idaho, USA	- Communication & Navigating the healthcare system: The health advisor role in cultural competency and communication helped the refugees in navigating the healthcare system - Fluency in English Language and the refugee language provided community recognition for the health advisors as leaders - Success of the clinic was validated by the chart reviews which showed missed clinical appointments dropping from 25% to 2.5%, and childhood immunizations being maintained at 100% compliance through a baby's first year of life. The C.A.R.E. Clinic Health Advisor played a key role in decreasing the language and transportation barriers
6	Borgschulte et al. 2018	Mixed Method Study (data from clinic register, doctors' documentation, participatory observations, self-administered questionnaire, key informant	To assess Outpatient Department (OPD) set-up, usage and experiences from May to December 2015.	Involved doctors, nurses and social worker, working at the OPD clinic in cologne, Germany	- During the observation period from May to December 2015 a total of 2205 persons (67% male) stayed in the emergency accommodation and 984 patient contacts (51% male) were registered which confirmed refugee clinic utilization - Consultation hours – 75% of the respondents (16 out of 20 staff completed the questionnaire survey) considered the opening hours per week for the adults and children as "exactly sufficient". The consultation hours in the OPD was generally well received by staff and users - Translation services such as web-based translation programs, multilingual staff members or peers were used

		interviews)			

Key elements of effective interventions

Five recurring themes emerged from the literature (Table 3).

Table 3 Generated themes from the codes

Paper no.	Author	Codes	Descriptive Themes
1	Im and Rosenberg 2016 (Qualitative)	1- A peer-led or peer-based intervention model 2- Community-based health workshops or health education	- Peer support - Health Education
2	Im 2018 (Qualitative)	1- Community leaders or peers 2- Health education or health promotion	- Peer support - Health Education
3	Yun et al. 2016 (Mixed Method)	1- Community health workers or patient navigators or health focal points (HFP)	- Peer support
4	McMurray et al. 2014 (Quantitative)	1- A dedicated refugee health clinic in partnership with workers at the local receiving centre – reception house who provide settlement assistance for refugees, translation services & health professionals 2- Integrated care 3- Timely access to care	- Multidisciplinary approach or stakeholder involvement - Timely intervention - Translation
5	Reavy et al. 2012 (Mixed Method)	1- Peer health advisor 2- Clinic is located 3- Educational Classes	- Peer support - Accessible location - Health Education
6	Borgschulte et al. 2018 (Mixed Method)	1- Outpatient clinic setup at the largest emergency accommodation centre 2- Translation services	- Accessible location - Flexible and sufficient Consultation hours - Multidisciplinary team - Translation

		3- Consultation hours 4- Family doctors, paediatricians, social workers, nurses worked at the clinic 5- the OPD was operated by the City authorities, German Red Cross and physicians from Association of Statutory Health Insurance Physicians (ASHIP)	

There were five final themes that emerged from the analysis which were considered the key elements of interventions; peer support, translation services, health education, accessible intervention and multidisciplinary approach.

1. Peer Support

Most studies discussed the importance of peer support as an element of an intervention, whereby people of similar background or with similar experiences provide support to each other to achieve a range of health and wellbeing outcomes (NHS England 2017). The analysis found that the success of peer support was assessed by its benefits to both the service user and the peer providing the support.

Two studies (Reavy et al. 2012; Yun et al. 2016) found that peers were helpful in addressing language barriers thus supporting the ability to navigate health services. Being able to communicate through a shared language to someone with a similar background helped the development of a trusting relationship between the client and peer:

''...I speak when somebody speaks Nepali […] And I'll dial the phone and then you have to speak and ask for the interpreter. That's what she [Peer name] told me and I spoke…. She was there. I was safe, secure...'' (Participant) (Yun et al. 2016).

The trusting relationship between the peer and the client helped facilitate access to health services (Reavy et al. 2012; Im and Rosenberg 2016; Im 2018): which was not the case with Health Professionals:

"…we can have better connection with people. They have more trust because they feel it is somebody that is from their own community (rather) than just the healthcare provider." (Peer) (Reavy et al. 2012).

The peer support intervention also helped to put clients at ease, providing an opportunity to speak out when they needed to:

"People have a lot of stress, but do not feel comfortable discussing it in front of others." (Client) (Im 2018).

Peer support increased self-confidence which also helped refugees to speak out in larger group contexts:

"feel confident enough to talk about feeling[s] in a large group". (Client) (Im 2018).

One participant stated how sharing a concern with their peer helped to relieve their stress and problem solved:

As he [one of the peer facilitators] showed me the direction, I went to four different screenings [……]. I had something like $2800 bills, and after the screening, I only had $250 to pay. This was a relief of stress. That is why we cannot always keep problems to ourselves. We have to ask for direction and they [peers] can help us relieve our stress. (Client) (Im and Rosenberg 2016).

One study (Yun et al. 2016) measured the impact of peers providing language support to clients. They found a reduction in the number of people with limited English proficiency (from 97.1% to 94.1%), a reduction in the number of clients that avoided making an appointment with a doctor due to language barriers (from 31.3% to 2.9%) and a reduction in the number of missed appointments due to lack of knowledge of public transport (from 22.6% to 0). Additionally, the number of clients with high levels of patient activation (self-confidence) to seek help increased from 5.7% to 32.4% after receiving peer support (Yun et al. 2016).

Studies also found that providing peer support was beneficial to the peers (Reavy et al. 2012; Yun et al. 2016) by enabling them to learn more about health that they could then share with their family:

''…my parents, they don't know how to do that stuff. So in order to help them, I volunteered, but also… for my experience.'' (Peer) (Yun et al. 2016).

The peer support role also created opportunities for the peer to develop self-confidence which in turn facilitated them to act as community leaders (Reavy et al. 2012; Yun et al. 2016).

"…Many of us were very poor in our home country. Many of our people are undereducated […] We… need to reach out and help these people..." (Peer) (Im 2018).

One study reported that many of the peers lacked experience with navigating health services themselves and required supervision in order to gain confidence assisting others (Yun et al. 2016). Despite the supervision, one peer reported not having the confidence to work independently (Yun et al. 2016).

"I didn't do it [peer] that much, right? We do it together. I didn't think—I didn't do it that much''. (Peer) (Yun et al. 2016).

2. Translation services

Rather than utilising peers to translate, two studies (McMurray et al. 2014; Borgschulte et al. 2018) found translation services were an important element of an effective intervention. These services included a web-based translation programme or translation through multilingual staff (Borgschulte et al. 2018). The provision of translation services was effective in increasing utilisation of the clinic by refugees (Borgschulte et al. 2018). In addition, people who received translation in a clinic setting were 35% more likely to report an understanding of the healthcare system than people who did not have access to translation (McMurray et al. 2014). However, there was no qualitative data to support these findings.

3. Health Education

Half the studies (Reavy et al. 2012; Im and Rosenberg 2016; Im 2018) found that providing health education within a group setting was an effective element of an intervention to facilitate refugees to access health services. Education focused on a healthy lifestyle but also included teaching about health services available and how to access them. The groups developed a mutually supportive relationship encouraging group open discussion and sharing ideas and problems which in turn increased access to health services:

"What I've learned most is that the first day I felt alone. I felt bad. [Over the sessions] the rest of us worked together to help each other and found our group..." (Participant) (Im and Rosenberg 2016).

One participant discussed how the rapport built within a group helped them to overcome financial barriers to accessing health services:

"We have our own stress, but I haven't expressed it to anyone. I had been visiting the local clinic, and this gentleman [one of the participants] had referred me to the financial screening at the university medical centre. Now my husband and me do not have to pay anything, but we are still getting treatment from the medical centre. […] He is taking medication now and he is doing better". (Participant) (Im 2018).

The participants also acknowledged the importance of health education in maintaining a healthy family and a healthy society.

"If our families are healthy, and if we have many healthy families, our community will be healthy. The more our communities get healthy, the more our society will get healthy." (Participant) (Im 2018).

4. Accessible intervention

Two studies (McMurray et al. 2014; Borgschulte et al. 2018) discussed how the accessibility of an intervention to support refugees' health service access affected the success of it. This included supporting timely access to care within a clinic setting by ensuring the clinic hours were accessible (McMurray et al. 2014; Borgschulte et al. 2018). One study, reported that 75% of clinic staff considered the opening hours as "*exactly sufficient*" (Borgschulte et al. 2018). However, no data reported refugees' interpretation of this.

One study found that the accessible timing of health care clinics for refugees led to a reduction in the number of reported problems with clients accessing healthcare from 19.4% to 15.4% (McMurray et al. 2014). The majority (92.3%) of clients reported an 'improved understanding of the healthcare system' due to the timeliness of the clinics compared to 79.2% of clients' pre-intervention (McMurray et al. 2014).

As well as clinic times, two studies (Reavy et al. 2012; Borgschulte et al. 2018) discussed how the accessibility of the location influenced the effectiveness of an intervention. A refugee clinic in a location close to refugee communities increased accessibility to the service (Reavy et al. 2012; Borgschulte et al. 2018). Data were collected examining clinic utilisation by the refugees at this accessible location (Borgschulte et al. 2018). It was found that 45% of refugees staying at a nearby emergency accommodation centre had registered for treatment at

the clinic (Borgschulte et al. 2018). However, there was no data reported comparing this with clinic accessibility before the intervention.

5. Multidisciplinary approach

Two studies (McMurray et al. 2014; Borgschulte et al. 2018) discussed the importance of a multidisciplinary approach when developing a successful intervention for refugees, in this context a specialist clinic. This approach involved partnership working with different stakeholders such as refugee case workers providing settlement assistance, healthcare professionals, translation services, and international medical graduates (McMurray et al. 2014) and also specialist healthcare professionals working within the clinic (Borgschulte et al. 2018). The studies found this multi-disciplinary approach led to the number of referrals to other health professionals (therapists, dentists, nutritionists, physiotherapists, optometrists) nearly doubling from 253 to 488 (McMurray et al. 2014), but also more effective diagnosis of different illnesses within the clinic due to the breadth of experience of the health professionals providing the service (Borgschulte et al. 2018). In addition, there was a 30% decrease in waiting times to see a healthcare professional referred from this clinic compared to refugees without access to the clinic (McMurray et al. 2014).

Discussion

The purpose of this systematic review was to identify the key elements of public health interventions that support refugees' access to health services. Five key elements have been identified across six different papers that utilised different methodological approaches to examine interventions individual to the context. The use of peers with a shared language and sociocultural background, helped to build a trusting relationship between the peer and the client. Where peer support was not used, translation services were considered essential to facilitate understanding of health services available and attendance at a clinic. The health education classes for refugees were effective in communicating public health messages that improved access to health services through mutual support and increased openness to share problems. Ensuring an accessible intervention in terms of location and timing increased a refugee clinic utilisation and an understanding of health services, which likely improved access to the clinic. A multidisciplinary approach was effective in improving diagnosis of conditions within the clinic, referral and access to specialist services.

Peer support was the most implemented key part of public health interventions, being included in five of the six studies. It was found to be highly successful due to the shared backgrounds of client and volunteer. This reflects findings from previous studies examining peer support with hardly reached populations. It was implemented to provide social and emotional support to bring about behavioural change in health contexts (Sokol and Fisher 2016). Like our systematic review, peer support was found to be successful in a number of different contexts due to the similar background of the peer and client fostering a trusting relationship. Similarly, trust has been found to be key in research examining peer support for people with diabetes, poor mental health, cancer and to support smoking cessation (Hoey et al. 2008; Dale et al. 2012; Walker and Bryant 2013; Ford et al. 2013) and providing social and emotional support to parents in a neonatal intensive care unit (Ardal et al. 2011).

Where peer support was not included as part of an intervention, translation services were effective in addressing individual language barriers which in turn increased understanding of the health care system and how to access care. This supports previous research around the impact of translation services on service uptake in people with limited English proficiency (Jacobs et al. 2001; Jacobs et al. 2004). However, by using online or face to face translation through staff rather than a peer, the opportunity to influence other barriers is missed. The trusting relationship between the peer and client appeared important to improve understanding of health services within the peer's cultural context. Using staff as interpreters would not provide this context. Translation services and most importantly peer support are successful elements addressing the language and cultural barriers faced by refugees in accessing health services. These two elements could be used to address some of the principles of good practice in community-based healthcare interventions for migrants and refugees, such as good communication, and linguistically and culturally sensitive services, described by Riza et al (2020).

We found that health education group classes as part of an intervention increased understanding about health systems, but also helped refugees to foster a sense of belonging within a group which had a positive impact on refugees mental and physical health, leading to lifestyle changes. This finding supports previous research where group classes increased knowledge about diabetes but also facilitated individual goal setting to take control over their condition bringing about behavioural change (Molsted et al. 2012; Steinsbekk et al. 2012). In both contexts, the key to success appears to be the group dynamics and mutual support as well as the knowledge gain. These together appear to positively influence clinical and psychosocial out-

comes in service users with health conditions (Molsted et al. 2012; Steinsbekk et al. 2012; Deakin et al. 2005). Fostering social networks and implementing educational interventions are described by Riza et al (2020) as good practice in community services for refugees. Health education group classes which appear to nurture positive group dynamic and mutual support may be the essential elements within education interventions to achieve best practice.

Our study found that the accessibility of the intervention (a refugee clinic) in terms of location and opening hours increased attendance at the clinic. This accessibility may have addressed financial and transport barriers refugees can experience accessing health services. Previous research has found that when comparing primary health care facilities located at different distances from the target population, those closest geographically achieved the highest attendance for services (Lebano et al. 2020; Tanser 2006; Tanser et al. 2006; Uhlman et al. 2013). Also, services which provided flexible opening hours were more likely to be attended (Neutens et al. 2012).

In addition, barriers to refugees accessing health services at an institutional and system level include a lack of trained and specialist staff. A clinic intervention with a multidisciplinary approach to health care could be a way of addressing these barriers. We found that partnerships between stakeholders or health care professionals improved refugee clinic access and reduced waiting times, especially for people requiring specialist care. This reflects previous research where a multidisciplinary approach increased service accessibility (Lebano et al. 2020; Patil et al. 2016; Sherer et al. 2002). Interventions that include partnership working also supports Riza et al. (2020) who found that close collaboration and partnerships among various stakeholders are key elements to successfully implement primary healthcare service delivery.

This systematic review discusses the key elements of an effective intervention that addresses barriers to health services in refugees. We could find no other systematic review which did this and have discussed how our findings could be used to operationalize the best practice principles in community health services described by Riza et al (2020). The key elements appear to address some of the barriers refugees' experience accessing health services at an individual, institutional and system level. However, the number of articles reviewed were small and it may have been that some papers which did relate to refugees were missed due to different use of terminology such as migrant or immigrant. In addition there was lack of information regarding the outcome of effective interventions in some studies and in some cases

only quantitative data were provided without participant responses to add strength to the evidence. Three studies (McMurray et al. 2014; Reavy et al. 2012; Borgschulte et al. 2018) were identified as poor quality studies but were included because they provided valuable contributions to the synthesis. Limited quantitative data were included in the review, and therefore cannot be used to generalise the findings. There is potential of missing some relevant papers because they were not published in English language or in relevant databases.

In the development of future interventions to support refugees' access to health services, public health practitioners need to examine the evidence around what may be effective in addressing the barriers faced. Peer support in particular is worthy consideration in such a context, in particular matching individuals by language and background. However, it is important that peers are well trained to ensure the relationship is effective. This would need to include boundaries, safeguarding and professional ethics to help them overcome peer-client relationship challenges (Kemp and Henderson 2012). Kemp and Henderson (2012) recommend the development of an accredited training course and formalisation of the peer support worker role to enable successful integration of peer support work into the mainstream health services. This would help to clearly define the role of the peer and their expectations and facilitate positive working relationships with their clients and healthcare providers (MacLellan et al. 2015; Gusdal et al. 2011). Training peers to support refugees could also help improve their understanding of health services which could reduce morbidity levels.

Conclusion

This systematic review identified five key elements of effective interventions that have been shown to address barriers to health services in refugees. Intervention development in this context should consider these elements and this may be particularly useful where refugees are being settled in areas where traditionally there has been little ethnic diversity in the population. This could include programmes such as the Syrian resettlement programme in the UK. The shared language and cultural background were powerful determinants to a successful peer-led intervention and therefore should be considered in future interventions and recommended in future policies to guide services in helping refugees' access health services. In the future, the five elements would need evaluating through research if they are applied to an intervention. In addition, further research is needed to look at how other barriers to accessing health services could be addressed, such as systematic racism and restrictive policies to accessing health services in this population.

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Compliance with ethical standards

Statement of non-submission of manuscript elsewhere - We confirm that this work is original and has neither been published elsewhere, nor is it currently under consideration for publication elsewhere.

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References

Abbas M, Aloudat T, Bartolomei J et al (2018) Migrant and refugee populations: A public health and policy perspective on a continuing global crisis. Antimicrobial Resistance and Infection Control 7(1):1-2. https://doi.org/10.1186/s13756-018-0403-4

Ardal F, Sulman J, Fuller-Thomson E (2011) Support like a walking stick: parent – buddy matching for language and culture in the NICU. Neonatal Network 30(2):89-98

Aspinall PJ, Watters C (2010) Refugees and asylum seekers: a review from an equality and human rights perspective. Research Report 52: Equality and Human Rights Commission, pp 35-37

Bhatia R, Wallace P (2007) Experiences of refugees and asylum seekers in general practice: a qualitative study. BMC Family Practice 8(48):2-5. https://doi.org/10.1186/1471-2296-8-48

Boland A, Cherry G, Dickson R (2017) Doing a systematic review: A student's guide London, SAGE Publications Ltd, pp 71-72

Borgschulte HS, Wiesmüller GA, Bunte A, Neuhann F (2018) Health care provision for refugees in Germany – one-year evaluation of an outpatient clinic in an urban emergency accommodation. BMC Health Services Research 18(488):2–8. https://doi.org/10.1186/s12913-018-3174-y

British Psychological Society (2007) Dementia: A NICE–SCIE Guideline on supporting people with dementia and their carers in health and social care. National Collaborating Centre for Mental Health (UK)

Chiarenza A, Horvat L, Lanting K, Ciannameo A, Suurmond J (2019) Addressing healthcare for migrants and ethnic minorities in Europe: A review of training programmes. Health Education Journal 78(1):9-23. https://doi.org/10.1177/0017896918793164

Dale JR, Williams SM, Bowyer V (2012) What is the effect of peer support on diabetes outcomes in adults? A systematic review. Diabetic Medicine 29(11):1361-1377. https://doi.org/10.1111/j.1464-5491.2012.03749.x

Deakin TA, McShane CE, Cade JE, Williams R (2005) Group based training for self-management strategies in people with type 2 diabetes mellitus. Cochrane database of systematic reviews. https://doi.org/10.1002/14651858.CD003417.pub2

Devakumar D, Birch M, Rubenstein LS, Osrin D, Sondorp E, Wells JCK (2015) Child health in Syria: recognising the lasting effects of warfare on health. Conflict and Health 9(34):1-3. https://doi.org/10.1186/s13031-015-0061-6

El-Khatib Z, Scales D, Vearey J, Forsberg BC (2013) Syrian refugees, between rocky crisis in Syria and hard inaccessibility to healthcare services in Lebanon and Jordan. Conflict and Health 7(18):1–3. https://doi.org/10.1186/1752-1505-7-18

EU Commission (2012) EU Charter of Fundamental Rights. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:12012P/TXT. Accessed 16 May 2019

Ford P, Clifford A, Gussy K, Gartner C (2013) A systematic review of peer-support programs for smoking cessation in disadvantaged groups. International journal of environmental research and public health 10(11):5507–5522. https://doi.org/10.3390/ijerph10115507

Gilbert B (2017) The Syrian Refugee Crisis: a resettlement programme that meets the needs of the most vulnerable. Centre for Social Justice (CSJ)

Gough D, Oliver S, Thomas J (2017) An introduction to systematic reviews. SAGE Publications Ltd, London, pp 125-126

GOV.UK (2017) Syrian Vulnerable Persons Resettlement Scheme (VPRS): Guidance for local authorities and partners. https://www.gov.uk/government/publications/syrian-vulnerable-person-resettlement-programme-fact-sheet. Accessed 12 May 2019

Greenhalgh T (2014) How to read a paper: The basics of evidence-based medicine. John Wiley & Sons Ltd

Gusdal AK, Obua C, Andualem T et al (2011) Peer counselors' role in supporting patients' adherence to ART in Ethiopia and Uganda. AIDS Care 23(6):657–662. https://doi.org/10.1080/09540121.2010.532531

Hoey LM, Ieropoli SC, White VM, Jefford M (2008) Systematic review of peer-support programs for people with cancer. Patient education and counseling 70(3):315-337. https://doi.org/10.1016/j.pec.2007.11.016

Im H (2018) Constructing health capital in ecological systems: A qualitative evaluation of community-based health workshops in the refugee community. Health & Social Care in the community 26(4):541-551. https://doi.org/10.1111/hsc.12568

Im H, Rosenberg R (2016) Building Social Capital Through a Peer-Led Community Health Workshop: A Pilot with the Bhutanese Refugee Community. Journal of Community Health 41(3):509-517. https://doi.org/10.1007/s10900-015-0124-z

Jacobs EA, Lauderdale DS, Meltzer D, Shorey JM, Levinson W, Thisted RA (2001) Impact of interpreter services on delivery of health care to limited-English-proficient patients. Journal of general internal medicine 16(7):468-474. https://doi.org/10.1046/j.1525-1497.2001.016007468.x

Jacobs EA, Shepard DS, Suaya, JA, Stone EL (2004) Overcoming language barriers in health care: costs and benefits of interpreter services. American journal of public health 94(5):866-869. https://doi.org/10.2105/ajph.94.5.866

Kemp V, Henderson AR (2012) Challenges faced by mental health peer support workers: Peer support from the peer supporter's point of view. Psychiatric Rehabilitation Journal 35(4):337-340. https://doi.org/10.2975/35.4.2012.337.340

Kohlenberger J, Buber-Ennser I, Rengs B, Leitner S, Landesmann M (2019) Barriers to health care access and service utilization of refugees in Austria: Evidence from a cross-sectional survey. Health Policy 123(9):835-837. https://doi.org/10.1016/j.healthpol.2019.01.014

Lebano A, Hamed S, Bradby H, Gil-Salmerón A, Durá-Ferrandis E, Garcés-Ferrer J, Azzedine F, Riza E, Karnaki P, Zota D, Linos A (2020) Migrants' and refugees' health status and healthcare in Europe: A scoping literature review. BMC Public Health, 20(1039). https://doi.org/10.1186/s12889-020-08749-8

MacLellan J, Surey J, Abubakar I, Stagg HR (2015) Peer support workers in health: a qualitative metasynthesis of their experiences. PLOS ONE 10(10):1-17. https://doi.org/10.1371/journal.pone.0141122

McKeary M, Newbold B (2010) Barriers to care: The challenges for Canadian refugees and their health care providers. Journal of Refugee Studies 23(4):529-540. https://doi.org/10.1093/jrs/feq038

McMurray J, Breward K, Breward M, Alder R, Arya N (2014) Integrated primary care improves access to healthcare for newly arrived refugees in Canada. Journal of immigrant and minority health 16(4):576-585. https://doi.org/10.1007/s10903-013-9954-x

Mirza M, Luna R, Mathews B et al (2014) Barriers to healthcare access among refugees with disabilities and chronic health conditions resettled in the US Midwest. Journal of immigrant and minority health 16(4):735-739. https://doi.org/10.1007/s10903-013-9906-5

Moher D, Liberati A, Tetzlaff J, Altman D (2009) Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Group. http://www.prisma-statement.org/. Accessed 17 July 2019

Molsted S, Tribler J, Poulsen PB, Snorgaard O (2012) The effects and costs of a group-based education programme for self-management of patients with Type 2 diabetes. A community-based study. Health education research 27(5)804-813. https://doi.org/10.1093/her/cyr053

Morris MD, Popper ST, Rodwell TC, Brodine SK, Brouwer KC (2009) Healthcare barriers of refugees post-resettlement. Journal of Community Health 34(6):531-536. https://doi.org/10.1007/s10900-009-9175-3

Neutens T, Delafontaine M, Schwanen T, Van de Weghe N (2012) The relationship between opening hours and accessibility of public service delivery. Journal of Transport Geography 25:128-140. https://doi.org/10.1016/j.jtrangeo.2011.03.004

NHS England (2017) Community capacity and peer support: Summary guide: NHS England. https://www.england.nhs.uk/wp-content/uploads/2017/06/516_Community-capacity-and-peer-support_S7.pdf. Accessed 20 July 2019

O'Donnell CA, Burns N, Mair FS et al (2016) Reducing the health care burden for marginalised migrants: the potential role for primary care in Europe. Health Policy 120(5): 495-496. https://doi.org/10.1016/j.healthpol.2016.03.012

Patil RD, Meinzen-Derr JK, Hendricks BL, Patil YJ (2016) Improving access and timeliness of care for veterans with head and neck squamous cell carcinoma: a multidisciplinary team's approach. The Laryngoscope 126(3):627–631. https://doi.org/10.1002/lary.25528

Popay J, Roberts H, Sowden A et al (2006) Guidance on the conduct of narrative synthesis in systematic reviews. A product from the ESRC methods programme Version, pp 5-19

Reavy K, Hobbs J, Hereford M, Crosby K (2012) A new clinic model for refugee health care: adaptation of cultural safety. Rural & Remote Health 12(1826):1–10. https://doi.org/10.22605/RRH1826

Rechel B, Mladovsky P, Ingleby D, Mackenbach JP, McKee M (2013) Migration and health in an increasingly diverse Europe. The Lancet 381(9873):1239. https://doi.org/10.1016/S0140-6736(12)62086-8

Refugee Council (2016) The Refugee Council submission to the Public Accounts Committee Inquiry on the Syrian Vulnerable Person Resettlement Programme. https://refugeecouncil.org.uk/information/resources/public-accounts-committee-inquiry-on-the-syrian-vulnerable-persons-resettlement-programme/. Accessed 12 May 2019

Refugee Council (2019) The UK's role in the international refugee protection system. https://refugeecouncil.org.uk/wp-content/uploads/2019/08/The-UKs-Role-in-the-international-refugee-protection-system-Aug-2019.pdf. Accessed 01 April 2020

Riza E, Kalkman S, Coritsidis A, Koubardas S, Vassiliu S, Lazarou D, Karnaki P, Zota D, Kantzanou M, Psaltopoulou T, Linos A (2020) Community-Based Healthcare for Migrants and Refugees: A Scoping Literature Review of Best Practices. Healthcare, 8(2), 115. https://doi.org/10.3390/healthcare8020115

Sherer R, Stieglitz K, Narra J et al (2002) HIV multidisciplinary teams work: support services improve access to and retention in HIV primary care. AIDS Care 14(sup1):31–44. https://doi.org/10.1080/09540120220149975

Sirriyeh R, Lawton R, Gardner P, Armitage G (2012) Reviewing studies with diverse designs: the development and evaluation of a new tool. Journal of evaluation in clinical practice 18(4):746-752. https://doi.org/10.1111/j.1365-2753.2011.01662.x

Sokol R, Fisher E (2016) Peer Support for the Hardly Reached: A Systematic Review. American Journal of Public Health 106(7):E1–E8. https://doi.org/10.2105/AJPH.2016.303180

Steinsbekk A, Rygg L, Lisulo M, Rise MB, Fretheim A (2012) Group based diabetes self–management education compared to routine treatment for people with type 2 diabetes mellitus. A systematic review with meta-analysis. BMC health services research 12(213):1-17. https://doi.org/10.1186/1472-6963-12-213

Tanser F (2006) Methodology for optimising location of new primary health care facilities in rural communities: a case study in KwaZulu-Natal, South Africa. Journal of Epidemiology & Community Health 60(10):846-850. http://dx.doi.org/10.1136/jech.2005.043265

Tanser F, Gijsbertsen B, Herbst K (2006) Modelling and understanding primary health care accessibility and utilization in rural South Africa: an exploration using a geographical information system. Social science & medicine 63(3):691–705. https://doi.org/10.1016/j.socscimed.2006.01.015

Thomas J, Harden A (2008) Methods for the thematic synthesis of qualitative research in systematic reviews. BMC medical research methodology 8(45):1–9. https://doi.org/10.1186/1471-2288-8-45

Thomson MS, Chaze F, George U, Guruge S (2015) Improving immigrant populations' access to mental health services in Canada: a review of barriers and recommendations. Journal of immigrant and minority health 17(6):1897-1899. https://doi.org/10.1007/s10903-015-0175-3

Uhlman MA, Gruca TS, Tracy R, Bing MT, Erickson BA (2013) Improving access to urologic care for rural populations through outreach clinics. Urology 82(6):1272-1276. https://doi.org/10.1016/j.urology.2013.08.053

UNHCR (1951) The 1951 Refugee Convention. https://www.unhcr.org/1951-refugee-convention.html. Accessed 13 May 2019

UNHCR (2017) Global trends: forced displacement in 2017. United Nations High Commissioner for Refugees. http://www.unhcr.org/5b27be547.pdf. Accessed 11 May 2019

UNHCR (2018) UNHCR's global trends in forced displacement – 2018 figures. https://www.unhcr.org/globaltrends2018/. Accessed 01 April 2020

UNICEF (2017) Refugee and Migrant Crisis in Europe. https://www.unicef.org/eca/sites/unicef.org.eca/files/UNICEF%20Advocacy%20Brief%20Health.pdf. Accessed 16 May 2019

University of York NHS CRD (2009) Undertaking Systematic Reviews of Research on Effectiveness. Report Number 4. https://www.york.ac.uk/media/crd/Systematic_Reviews.pdf. Accessed 18 July 2019

Vermette D, Shetgiri R, Al Zuheiri H, Flores G (2015) Healthcare Access for Iraqi Refugee Children in Texas: Persistent Barriers, Potential Solutions, and Policy Implications. Journal Of Immigrant And Minority Health 17(5):1529-1532. https://doi.org/10.1007/s10903-014-0110-z

Walker G, Bryant W (2013) Peer support in adult mental health services: A metasynthesis of qualitative findings. Psychiatric Rehabilitation Journal 36(1):28-34. https://doi.org/10.1037/h0094744

Yun K, Paul P, Subedi P, Kuikel L, Nguyen GT, Barg FK (2016) Help-Seeking Behavior and Health Care Navigation by Bhutanese Refugees. Journal Of Community Health 41(3):526-534. https://doi.org/10.1007/s10900-015-0126-x