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Review Paper

Migrant children within Europe: a systematic review of children's perspectives on their health experiences

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ABSTRACT

Objectives: To review the extant literature to explore what is known about children's own perspectives on their health experiences, focussing on children and young people who have migrated into, and within, Europe.

Study design: A systematic review with narrative synthesis.

Methods: A review of English language articles was performed in June 2016 using the following databases: MEDLINE, CINAHL, Cochrane and Web of Science. Included articles had to report data generated directly with children, up to 18 years of age, who had migrated across national borders into, or within, Europe during their own lifetimes. Extraction from articles was undertaken by all authors, and quality assessment of included reviews was performed using the Mixed Methods Appraisal Tool.

Results: The articles in the final data set included research based on four broad areas: alcohol, smoking and substance use; diet, eating disorders and overweight; emotional, psychological and mental health issues; and children's views and experiences of health and health services. Most studies were cross-sectional analytic or incidence or prevalence studies.

Conclusion: There is a general lack of clarity in the literature regarding the reporting of children's own migration status. Children's voices are often subsumed within those of their adult parents or carers. There is a need to promote more child-focussed research which gives voice to migrant children to better understand the complex and multidimensional factors that contribute to their (ill)health.

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Introduction

International migration over recent decades has been characterised by the diversification of migrants from non-European backgrounds, concentrated in a ‘shrinking pool of prime destination countries’, particularly within Europe and the Americas (p.238). Migration to Europe has been steadily increasing and, indeed, the European Union (EU) has been described as a ‘global migration magnet’ (p.294). In the last decade, in what has been labelled a ‘migration crisis’, the EU has received unparalleled numbers of migrants, refugees and asylum seekers. In 2014, 1.9 million people migrated into the EU from non-member countries with a further 1.8 million migrating between member states. While migration is increasing across Europe, this trend has been particularly marked in Western Europe, where nations have also experienced what has been referred to as a ‘surge’ of inward migration from Eastern Europe over recent years.

The 10th European Forum on the rights of the child defines children in migration as those ‘in search of survival, security, improved standards of living, education, economic opportunities, protection from exploitation and abuse, family reunification or a combination of these factors. They may travel with their family or independently (unaccompanied child) or with an extended family or a non-family member (separated child)’ (p.4).

The population of child migrants is therefore highly diverse, and while the United Nations Children’s Fund (UNICEF) suggested, in 2016, that there were 5.4 million child migrants in Europe, it is difficult to establish the number of children who enter Europe for reasons other than to seek asylum. UNICEF notes that across the globe, 50 million children have migrated, over half of whom have been forcibly displaced because of conflict. Within the EU, just under one-third of first-time asylum seekers in 2015 were children, aged younger than 18 years. Given this ‘crisis’ for children, it is not surprising that child migrants’ health has been the subject of increasing concern. In 2008, the World Health Organisation drew attention to the need to promote the health of all migrants, and the particular needs of vulnerable groups, including children, within migrant populations have been further highlighted. In this article, focussing on children and young people who have migrated into and within Europe, we therefore review the extant literature to answer the following question: ‘What is known about children’s own perspectives on their health experiences?’

Methods

A systematic review with narrative synthesis was undertaken as defined by Grant and Booth.

Data sources

A systematic literature search was conducted using the following databases: MEDLINE, CINAHL, Cochrane and Web of Science. A defined search strategy was devised for electronic databases covering all main terms associated with definitions of child migrants (child*, young, adolescent, teenage, migra*, emigra*, immigra*, transient, refugee, asylum seek*) and health (including ‘health care’, ‘quality of life’, ‘health promotion’, ‘mental health’, ‘sexual health’, tobacco, drug and alcohol use, ‘dental health’, diet and nutrition). A time span of January 2007 (when Bulgaria and Romania joined the EU) to 2016 (June) was selected. Electronic database searching was supplemented by reference checking. The bibliographies of literature reviews were reviewed to ensure that all relevant empirical studies had been identified and included.

Study selection

The articles included in the review had to meet three criteria. They were (1) literature reviews or empirical studies reporting data generated directly with children aged up to 18 years; (2) articles reporting data on the health experiences of first-generation migrant children, who had migrated across national borders into or within Europe (defined as the EU, Scandinavian countries and Switzerland) during their own lifetimes; and (3) articles published in English. All authors involved in the screening of studies, scanning for relevance and assessing full texts against eligibility criteria. Where there was disagreement, articles were discussed until consensus was reached.

Search results

The search identified 1304 articles. After scanning of titles and abstracts for relevance, 327 full articles were retrieved and reviewed in detail. Most excluded articles were rejected because they either conflated children’s migration status with their parents’ migration status or because it was not possible to differentiate findings relating to children who had migrated in their own lifetimes from children whose parents had migrated before their birth. After application of all inclusion and exclusion criteria, 47 articles were retained and subjected to critical appraisal.

Quality assessment

An assessment of the methodological quality of the studies that met all inclusion criteria was carried out by P.C. and verified by J.T. using the Mixed Method Appraisal Tool (MMAT). This provides method-specific assessment questions, which can then be scored, allowing concomitant appraisal of quantitative, qualitative and mixed methods empirical studies. MMAT scores range from 1* (weak) to 4*
(strong). As our aim was to understand the range of health issues for which data from migrant children were available and how children experienced these, rather than to review the effectiveness of clinical or service interventions, we set a minimum 2* quality criterion. One study was, therefore, excluded after quality appraisal

The main shortcomings arose from the failure to report response rates. Other limitations were associated with underreporting of study contexts in qualitative studies. Forty-six full-text articles were, therefore, included in the thematic review and narrative synthesis (Fig. 1).

**Thematic review**

Data extracted from the 46 articles comprised children’s country of origin, children’s country of settlement, methods, sample size, age range of children included and key findings areas (Table 1). Findings sections from each article were then subjected to thematic analysis. Four overarching themes were identified: alcohol, smoking and substance use; diet, eating disorders and overweight; emotional, psychological and mental health issues; and children’s views and experiences of health and health services. While these resonate with some of the search terms used in the study, it is notable that not all search terms generated relevant articles.

**Results**

**Types of empirical studies**

Most studies generated self-report, quantitative data with children and were cross-sectional analytic studies (23). Of these, 60% (14) reported survey data, often school based. Migrant children were not deliberately or preferentially recruited to these studies, and they, therefore, constituted relatively small proportions of larger data sets. The remaining 13 quantitative articles reported descriptive incidence or prevalence studies. One mixed methods study was included, which used an embedded design as was one randomised controlled trial. Of the eight qualitative studies, seven were qualitative descriptive studies and one used a phenomenological approach. Given the diversity of study types, it is not surprising that sample sizes of first-generation migrants varied considerably, from 12,432 in a Spanish study

Table 1 includes the quality scores of each of the included articles, and Table 2 illustrates the study types with the associated mean quality scores for each type.

Who are the migrant children?

Although there was notable variability in the age range of children who participated in the studies, most children were in late middle childhood or adolescence. 32 of the 47 articles (68%) reported data from children aged between 10 and 18 years, and of these, 21 reported data only from adolescents aged 13 years or older. Most articles (25) were concerned with refugee and/or asylum-seeking children. Fourteen studies considered refugee children, of which eight focussed on or included unaccompanied refugee minors. Twelve studies were concerned with asylum-seeking children, of which seven focussed on or included unaccompanied minors. One study recruited both refugees and asylum seekers (RAS). However, in the remaining 21 studies, definitions of first-generation migrant children varied considerably (Table 3).

Children’s countries of origin and their destination countries

Children’s countries of origin also varied considerably. A minority of studies focussed on children from one or two specified countries of origin. However, most studies included children from many different countries of origin. In these studies, analyses either compared all migrants or grouped categories (such as Asian, African) of migrants with indigenous and/or second-generation migrant children.

Countries of settlement also varied, but articles evidence a clear Northern and Western European focus. Most articles considered migrant health issues within country-specific contexts, although three articles provided comparisons between two or more European destination countries (Table 4).

The health and well-being of child migrants

Alcohol, smoking and substance use

Three articles reported data from children relating to alcohol and/or substance use. These compared prevalence of and factors influencing self-reported alcohol and substance use among migrants and non-migrants. All three studies demonstrated decreased prevalence of some harmful health practices among young migrants, when compared with the majority population. The drinking of alcohol was less prevalent among first-generation migrants in Norway, Sweden and Spain. Prevalence of cannabis use was also lower among migrants in Norway and Spain, and there was lower use of stimulants/sedative hypnotics by Spanish migrants than by their indigenous peers. However, illicit drug use (hashish, marijuana, amphetamine and heroin) by first-generation migrants (categorised as Nordic, non-Nordic European and non-European) in Sweden was significantly higher than among ethnic Swedes; the risk was especially high for girls born in other Nordic countries and for boys born in non-

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a The main quantitative element of the study reported by Fazel, Doll and Stein (2009) was appraised as 4*. The only data generated with children derived from the qualitative element described as a ‘simple self-report questionnaire’. This was appraised as 1* and, therefore, not included in the thematic analysis.

b The generic term migrant is used in preference to alternatives such as ‘immigrant’ in acknowledgement of the pejorative connotations, noted by Salway et al. of such terms in some cultural contexts.

c For convenience, the authors use the terms ‘host country’, ‘country of settlement’ and ‘destination country’ interchangeably to refer to the countries in which children were resident at the time that they participated in the research studies. However, the authors recognise that the country in which research was sited may not be a child’s final destination country.

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Two studies also considered tobacco use. While no difference in smoking between migrants and indigenous young people was found in Norway, migrant children who also had foreign-born parents were significantly less likely to smoke than their Spanish-born peers. Differences between migrant groups were also noted. Asian migrants had particularly low rates of cannabis use in Norway and were least likely to drink alcohol in both Norway and Spain. In Sweden, drinking prevalence was lowest among non-European migrants (mainly from Iran, Iraq, Lebanon and Thailand): this difference was accounted for by the low alcohol use of girls from these countries of origin. Explanations for the differences in health practices between migrant young people and their indigenous peers in host countries acknowledge that alcohol- and drug-related norms and values from migrants’ countries of origin may be implicated. Lower risk of engaging in binge drinking, tobacco and cannabis use was seen for migrants born in countries where Islam is the most common religion, low/medium-income countries and from countries with low/medium substance use. All authors pay particular attention to familial, social and community factors in the host nations. The transmission of religious norms and attitudes to alcohol within Muslim families and communities may help to explain the lower rates of drinking reported by non-European migrants in Svensson and Hagquist’s study. Abebe et al. highlight ‘strong family attachment and social support’ (p.999) as a protective factor for young Asian migrants in Norway who are able to access an

Fig. 1 – PRISMA flow diagram.
Table 1 - Description of the included studies.

<table>
<thead>
<tr>
<th>Author and date</th>
<th>Category of first-generation migrants</th>
<th>Children's home country</th>
<th>Children's host country</th>
<th>Methods</th>
<th>First-generation migrant sample size</th>
<th>Participants' age</th>
<th>Main findings area</th>
<th>MMAT score (possible range 1−4)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abebe et al. 2015</td>
<td>First-generation migrants</td>
<td>Asia (predominantly Pakistan, Vietnam, Sri Lanka and India), Middle East (predominantly Iraq, Iran and Turkey), Europe and the USA and Africa (predominantly Somalia and Morocco)</td>
<td>Norway</td>
<td>Quantitative - questionnaire</td>
<td>1079</td>
<td>14−17 years</td>
<td>Alcohol, tobacco and cannabis use</td>
<td>4</td>
</tr>
<tr>
<td>Bean et al. 2007</td>
<td>Unaccompanied refugee minors and accompanied immigrants/refugees</td>
<td>Dutch sample: 48 countries, (predominantly Angola, Sierra Leone and China) Belgium sample: 111 countries (predominantly Morocco, Ghana and Turkey; no information was given about home country of Dutch reference sample of migrants)</td>
<td>The Netherlands and Belgium</td>
<td>Quantitative - questionnaire</td>
<td>2297</td>
<td>Younger than 18 years</td>
<td>Emotional, psychological and mental health</td>
<td>3</td>
</tr>
<tr>
<td>Briones 2012</td>
<td>First-generation migrants</td>
<td>Morocco and Ecuador</td>
<td>Spain</td>
<td>Quantitative - questionnaire</td>
<td>437</td>
<td>11−18 years</td>
<td>Emotional, psychological and mental health</td>
<td>2</td>
</tr>
<tr>
<td>Bronstein and Montgomery 2013</td>
<td>Unaccompanied adolescent asylum seekers</td>
<td>Afghanistan</td>
<td>UK</td>
<td>Quantitative - questionnaires</td>
<td>222</td>
<td>13.14−17.97 years; (mean 16.34 years)</td>
<td>Emotional, psychological and mental health</td>
<td>4</td>
</tr>
<tr>
<td>Bronstein et al. 2012</td>
<td>Unaccompanied adolescent asylum seekers</td>
<td>Afghanistan</td>
<td>UK</td>
<td>Quantitative - questionnaire</td>
<td>222</td>
<td>13−18 years old</td>
<td>Emotional, psychological and mental health</td>
<td>3</td>
</tr>
<tr>
<td>Bronstein et al. 2013</td>
<td>Unaccompanied adolescent asylum seekers</td>
<td>Afghanistan</td>
<td>UK</td>
<td>Quantitative - questionnaire</td>
<td>222</td>
<td>Mean age 16.34 years</td>
<td>Emotional, psychological and mental health</td>
<td>4</td>
</tr>
<tr>
<td>Chase 2010</td>
<td>Unaccompanied asylum seekers</td>
<td>18 different countries, males most commonly from Afghanistan and females most commonly from Eritrea</td>
<td>UK</td>
<td>Qualitative - interviews</td>
<td>54</td>
<td>9−17 years at the time of arrival in the UK. Age at time of interview was 11−23 years. (responses from older than 18 years were identifiable in the study)</td>
<td>Emotional, psychological and mental health</td>
<td>3</td>
</tr>
</tbody>
</table>

(continued on next page)
<table>
<thead>
<tr>
<th>Author and date</th>
<th>Category of first-generation migrants</th>
<th>Children’s home country</th>
<th>Children’s host country</th>
<th>Methods</th>
<th>First-generation migrant sample size</th>
<th>Participants’ age</th>
<th>Main findings area</th>
<th>MMAT score (possible range 1–4)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daud and Rydelius 2009</td>
<td>Refugees</td>
<td>Iraq, Egypt, Syria and Morocco</td>
<td>Sweden</td>
<td>Quantitative - questionnaire</td>
<td>80</td>
<td>7–16 years (mean 12.1 years)</td>
<td>Emotional, psychological and mental health</td>
<td>3</td>
</tr>
<tr>
<td>Derluyn et al. 2008</td>
<td>Accompanied and unaccompanied adolescents, refugees and other migrants</td>
<td>93 different countries of origin mostly Africa, Asia, Eastern Europe, South and Central America.</td>
<td>Belgium</td>
<td>Quantitative - questionnaire</td>
<td>1219</td>
<td>11–18 years</td>
<td>Emotional, psychological and mental health</td>
<td>4</td>
</tr>
<tr>
<td>Derluyn et al. 2009</td>
<td>Accompanied and unaccompanied adolescent refugees</td>
<td>Unaccompanied: 39 different countries (mainly Angola, Albania and Afghanistan). Accompanied: number of countries not noted, mainly from Morocco, Angola and Turkey.</td>
<td>Belgium</td>
<td>Quantitative - questionnaire</td>
<td>1234</td>
<td>11–18 years</td>
<td>Emotional, psychological and mental health</td>
<td>4</td>
</tr>
<tr>
<td>Esteban-Gonzalo et al. 2014</td>
<td>First-generation migrants</td>
<td>Mostly Latin America and Eastern Europe</td>
<td>Spain</td>
<td>Quantitative - questionnaire</td>
<td>335</td>
<td>13–17 years</td>
<td>Diet, eating disorders and overweight</td>
<td>4</td>
</tr>
<tr>
<td>Esteban-Gonzalo et al. 2013</td>
<td>First-generation migrants</td>
<td>Mostly Latin America and Eastern Europe</td>
<td>Spain</td>
<td>Quantitative - questionnaire</td>
<td>335</td>
<td>13–17 years</td>
<td>Diet, eating disorders and overweight</td>
<td>4</td>
</tr>
<tr>
<td>Esteban-Gonzalo et al. 2015</td>
<td>First-generation migrants</td>
<td>Mostly Latin America and Eastern Europe</td>
<td>Spain</td>
<td>Quantitative - questionnaire</td>
<td>335</td>
<td>13–17 years</td>
<td>Diet, eating disorders and overweight</td>
<td>4</td>
</tr>
<tr>
<td>Fandrem et al. 2009</td>
<td>First-generation migrants</td>
<td>Home countries for all immigrants mainly Pakistan, Sweden, Denmark, Vietnam, Iraq, Somalia, Bosnia-Herzegovina. No specific data were given for child migrants Bosnia-Serbia-Groatia</td>
<td>Norway</td>
<td>Quantitative - questionnaire.</td>
<td>216</td>
<td>13–15 years</td>
<td>Emotional, psychological and mental health</td>
<td>4</td>
</tr>
<tr>
<td>Goldin et al. 2008</td>
<td>Refugees</td>
<td></td>
<td>Sweden</td>
<td>Quantitative – questionnaire</td>
<td>48</td>
<td>7–20 years (data for migrants aged younger than 18 years were identifiable)</td>
<td>Emotional, psychological and mental health</td>
<td>4</td>
</tr>
<tr>
<td>Groark et al. 2010</td>
<td>Unaccompanied asylum-seeking adolescents</td>
<td>Africa and Asia</td>
<td>UK</td>
<td>Primarily qualitative - interpretative phenomenological analysis (IPA)</td>
<td>6</td>
<td>16–18 years</td>
<td>Emotional, psychological and mental health</td>
<td>2</td>
</tr>
<tr>
<td>First author</td>
<td>Group</td>
<td>Nationality</td>
<td>Location</td>
<td>Type</td>
<td>Sample Size</td>
<td>Age (Mean ± SD)</td>
<td>Outcomes</td>
<td></td>
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</tr>
<tr>
<td>Hernando et al. 2013</td>
<td>First-generation migrants</td>
<td>18 different countries: mainly Morocco, Ecuador, Moldova, Romania, Ukraine and Brazil</td>
<td>Spain and Portugal</td>
<td>Quantitative - questionnaire</td>
<td>108</td>
<td>10–17 years (mean 13.77 years)</td>
<td>Emotional, psychological and mental health</td>
<td></td>
</tr>
<tr>
<td>Hodes et al. 2008</td>
<td>Unaccompanied and accompanied refugee minors</td>
<td>24 different countries. Unaccompanied: predominantly from the Balkans and Africa. Accompanied: mainly from the Middle East</td>
<td>England</td>
<td>Quantitative - questionnaire</td>
<td>78</td>
<td>13–18 years</td>
<td>Emotional, psychological and mental health</td>
<td></td>
</tr>
<tr>
<td>Hollins et al. 2007</td>
<td>Unaccompanied refugee minors</td>
<td>Albania and Kosovo</td>
<td>England</td>
<td>Mixed methods: questionnaire +24-h diary + interview</td>
<td>99</td>
<td>16–18 years</td>
<td>Emotional, psychological and mental health</td>
<td></td>
</tr>
<tr>
<td>Hopkins and Hill, 2010</td>
<td>Unaccompanied asylum seekers</td>
<td>Mostly from Africa, the remainder from Asia and Eastern Europe</td>
<td>Scotland</td>
<td>Qualitative - Interviews + group work</td>
<td>31</td>
<td>15–17 years</td>
<td>Diet, eating disorders and overweight</td>
<td></td>
</tr>
<tr>
<td>Jensen et al. 2015</td>
<td>Unaccompanied asylum seekers</td>
<td>14 different countries, predominantly Afghanistan, Eritrea, Somalia and Sri Lanka</td>
<td>Norway</td>
<td>Quantitative – questionnaire</td>
<td>93</td>
<td>10–16 years (mean 13.8 years)</td>
<td>Emotional, psychological and mental health</td>
<td></td>
</tr>
<tr>
<td>Kalverboer et al. 2009</td>
<td>Asylum seekers</td>
<td>Not stated</td>
<td>The Netherlands</td>
<td>Quantitative – questionnaire</td>
<td>52</td>
<td>Not clearly stated. Appears to be up to the age of 18 years</td>
<td>Emotional, psychological and mental health</td>
<td></td>
</tr>
<tr>
<td>Laurens et al. 2008</td>
<td>First-generation migrants</td>
<td>Africa and Asia</td>
<td>England</td>
<td>Quantitative - questionnaire</td>
<td>85</td>
<td>9–12 years</td>
<td>Emotional, psychological and mental health</td>
<td></td>
</tr>
<tr>
<td>Lindstrom et al. 2014</td>
<td>First-generation migrants</td>
<td>Outside Sweden in Europe or outside Europe</td>
<td>Sweden</td>
<td>Quantitative - questionnaire</td>
<td>584</td>
<td>15–16 years</td>
<td>Views and experiences of health and services</td>
<td></td>
</tr>
<tr>
<td>Majumder et al. 2015</td>
<td>Unaccompanied refugee and asylum-seeking minors</td>
<td>Afghanistan, Somalia, Iran and Eritrea</td>
<td>England</td>
<td>Qualitative - interviews</td>
<td>15</td>
<td>15–18 years</td>
<td>Emotional, psychological and mental health. Views and experiences of health and services</td>
<td></td>
</tr>
<tr>
<td>Author and date</td>
<td>Category of first-generation migrants</td>
<td>Children’s home country</td>
<td>Children’s host country</td>
<td>Methods</td>
<td>First-generation migrant sample size</td>
<td>Participants’ age</td>
<td>Main findings area</td>
<td>MMAT score (possible range 1*–4*)</td>
</tr>
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</tr>
<tr>
<td>Neto, 2010</td>
<td>Return migrants</td>
<td>Portugal (and had previously migrated to France) or France</td>
<td>Portugal</td>
<td>Quantitative - questionnaire</td>
<td>360</td>
<td>14–19 years (mean 16.8 years)</td>
<td>Emotional, psychological and mental health</td>
<td>2</td>
</tr>
<tr>
<td>Nielsen et al. 2008</td>
<td>Asylum seekers</td>
<td>Predominantly from former Yugoslavia and Iraq</td>
<td>Denmark</td>
<td>Quantitative study - questionnaires</td>
<td>260</td>
<td>4–16 years</td>
<td>Emotional, psychological and mental health</td>
<td>4</td>
</tr>
<tr>
<td>Pinto Weise and Burhost 2007</td>
<td>Accompanied and unaccompanied asylum seekers</td>
<td>Mainly Africa and Asia with a small proportion from Eastern Europe</td>
<td>The Netherlands</td>
<td>Quantitative study – questionnaire completed from client records (recorded from interviews with children)</td>
<td>129</td>
<td>Up to 18 years</td>
<td>Emotional, psychological and mental health</td>
<td>4</td>
</tr>
<tr>
<td>Ruf et al. 2010</td>
<td>Refugees</td>
<td>Turkey, Balkan, Syria, Chechnya, Russia and Georgia</td>
<td>Germany</td>
<td>Quantitative study - questionnaires</td>
<td>26</td>
<td>7–16 years</td>
<td>Emotional, psychological and mental health</td>
<td>4</td>
</tr>
<tr>
<td>Sanchez-Cao et al. 2012</td>
<td>Unaccompanied asylum seekers</td>
<td>Mainly Africa (predominantly the Horn of Africa and Sub-Saharan Africa) and Europe (mainly Kosovo)</td>
<td>England</td>
<td>Quantitative - questionnaire</td>
<td>71</td>
<td>Up to 18 years</td>
<td>Emotional, psychological and mental health</td>
<td>4</td>
</tr>
<tr>
<td>Sarasa-Renedo et al. 2015</td>
<td>First-generation migrants</td>
<td>Predominantly from Latin America (outside South-Cone) and non-Eastern Europe</td>
<td>Spain</td>
<td>Quantitative - questionnaire</td>
<td>12,432</td>
<td>14–18 years</td>
<td>Alcohol and substance misuse</td>
<td>4</td>
</tr>
<tr>
<td>Sime 2014</td>
<td>Migrant children</td>
<td>Mainly Poland + other Eastern Europe</td>
<td>Scotland</td>
<td>Qualitative - interviews and focus groups</td>
<td>57</td>
<td>7–16 years</td>
<td>Views and experiences of health and services</td>
<td>4</td>
</tr>
<tr>
<td>Sinha and Uppal 2009</td>
<td>Asylum seekers</td>
<td>Predominantly Africa (mainly Democratic Republic of Congo)</td>
<td>England</td>
<td>Qualitative study – interviews and focus groups.</td>
<td>17</td>
<td>15–18 years</td>
<td>Emotional, psychological and mental health</td>
<td>4</td>
</tr>
<tr>
<td>Sleijpen et al. 2016</td>
<td>Refugees and asylum seekers</td>
<td>Predominantly Iraq, Armenia, Syria, Afghanistan and Somalia</td>
<td>The Netherlands</td>
<td>Quantitative study - questionnaire</td>
<td>111</td>
<td>12–17 years</td>
<td>Emotional, psychological and mental health</td>
<td>3</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Study</th>
<th>Type of Migrants</th>
<th>Study Region</th>
<th>Methodology</th>
<th>Sample Size</th>
<th>Age Range</th>
<th>Health Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stefanek et al. 2012</td>
<td>First-generation migrants</td>
<td>Austria</td>
<td>Quantitative - questionnaire</td>
<td>120</td>
<td>14–19 years</td>
<td>Emotional, psychological and mental health</td>
</tr>
<tr>
<td>Steinhausen et al. 2009</td>
<td>First-generation migrants</td>
<td>Northwestern Europe (Austria, Germany, UK), South Europe (Italy and Spain), Southeastern Europe (former Yugoslavia, Turkey) and other continents (Africa, Americas, Asia, Australia)</td>
<td>Quantitative - questionnaire</td>
<td>188</td>
<td>10–17 years (mean 13.8 years)</td>
<td>Emotional, psychological and mental health</td>
</tr>
<tr>
<td>Stevens et al. 2015</td>
<td>First-generation migrants</td>
<td>Multiple countries noted. Varied for each host country</td>
<td>Quantitative - questionnaire</td>
<td>4035</td>
<td>11, 13 and 15 years</td>
<td>Emotional, psychological and mental health</td>
</tr>
<tr>
<td>Svensson and Hagquist, 2010</td>
<td>First-generation migrants</td>
<td>Nordic, Europe (non-Nordic) and non-Europe</td>
<td>Quantitative - questionnaire</td>
<td>1046 (stated only as 8% of 13,070)</td>
<td>13–16 years</td>
<td>Alcohol and drug use</td>
</tr>
<tr>
<td>Svensson et al. 2009</td>
<td>Refugees</td>
<td>Central Asia</td>
<td>Qualitative - children's own photos guiding interviews</td>
<td>3</td>
<td>17, 17 and 12 years</td>
<td>Emotional, psychological and mental health</td>
</tr>
<tr>
<td>Van Geel and Vedder, 2010</td>
<td>First-generation migrants</td>
<td>Predominantly Turkey, Surinam, Morocco and the Netherlands Antilles</td>
<td>Quantitative - questionnaires</td>
<td>152</td>
<td>12–19 years</td>
<td>Emotional, psychological and mental health</td>
</tr>
<tr>
<td>Vathi and Duci 2016</td>
<td>First-generation return migrants</td>
<td>Greece</td>
<td>Qualitative - in-depth interviews and participant observation</td>
<td>81</td>
<td>11–19 years</td>
<td>Emotional, psychological and mental health</td>
</tr>
<tr>
<td>Vervliet et al. 2014</td>
<td>Unaccompanied refugee minors</td>
<td>Predominantly Afghanistan, Guinea, Congo, Somalia and Morocco</td>
<td>Quantitative - questionnaires</td>
<td>307</td>
<td>15–18 years</td>
<td>Emotional, psychological and mental health</td>
</tr>
<tr>
<td>Vieno et al. 2009</td>
<td>First-generation migrants</td>
<td>Not stated</td>
<td>Quantitative - questionnaire</td>
<td>481</td>
<td>11, 13 and 15 years</td>
<td>Emotional, psychological and mental health</td>
</tr>
<tr>
<td>Volkl-Kernstock et al. 2014</td>
<td>Unaccompanied refugees</td>
<td>Africa, predominantly Gambia, Somalis and Nigeria</td>
<td>Quantitative - questionnaire</td>
<td>41</td>
<td>15–18 years (mean 16.95 years)</td>
<td>Emotional, psychological and mental health</td>
</tr>
<tr>
<td>Vlieger et al. 2011</td>
<td>Asylum seekers</td>
<td>Near east (mainly Afghanistan, Iran and Iraq), Eastern Europe (mainly Azerbaijan, Armenia and former Yugoslavia), Africa (mainly Angola or Sudan)</td>
<td>Quantitative - questionnaire</td>
<td>267</td>
<td>4–16 years</td>
<td>Emotional, psychological and mental health</td>
</tr>
</tbody>
</table>

MMAT, Mixed Method Appraisal Tool.
poorly to national recommendations for most food groups but conformed more closely to guidelines for vegetable consumption than did the diets of Spanish adolescents, although this difference disappeared for migrant residents for more than 6 years. Migrant young people were also more likely to consume sweets and soft drinks than ethnic Spanish adolescents, and they had a higher prevalence of overweight (20%, based on body mass index calculated from self-reported height and weight) than the general adolescent population (17%), although this difference was not statistically significant. Prevalence of overweight and prevalence of eating disorders among female adolescent migrants were higher for those who had lived in Spain for 6 or fewer years than it was for migrants who had resided for longer than 6 years. These findings contrast with those from other studies (see Abebe et al.; Svensson and Hagquist), which have associated longer residence with negative health impacts as migrants adopt the ‘unhealthier’ practices of host nations. A number of possible contributing factors are suggested. Eating disorders among new female migrants in Spain may be associated with stress during acculturation compounded by pressure to adapt to new cultural body shape norms. Poor adherence to national dietary recommendations may reflect a transition, within lower income migrant families, to ‘more processed, energy-dense foods (which) are replacing less calorific foods because they are cheaper and quicker to prepare’. This parallels findings of Hopkins and Hill, illustrated through the experience of one unaccompanied asylum-seeking minor in Scotland who reported ‘eating KFC every day’. However, Esteban-Gonzalo et al. speculate that changes in lifestyle over time that may be associated with greater integration into host societies could account for the reduction in the consumption of high-sugar goods and the increase in vegetable consumption and, potentially, for the reduced risk of overweight among migrants with longer residence in the host country, which they note in their study.

**Emotional, psychological and mental health issues**

Thirty-eight articles reported findings of relevance to this theme. There was substantial heterogeneity in the tools used to measure mental health and emotional and psychological issues. In addition to dedicated survey questionnaires, 23 different measurement tools were used, making comparisons between studies problematic and prevalence rates difficult to assess with confidence.

Twenty-five articles focussed on RAS children’s mental health. This population of migrants is noted to be at elevated risk of mental health problems. The experience of stressful events and their impact on RAS children’s mental health—predominantly post-traumatic stress disorder (PTSD)—have been explored extensively. Reports of prevalence of PTSD within RAS populations vary widely, with between 20% and 84% of children demonstrating clinically significant symptoms, and these symptoms appear to be positively associated with the number of stressful events that individuals have experienced. Unaccompanied children are also at greater risk of PTSD than accompanied children. The effect of age and gender, as potentially moderating factors, is unclear. Most

### Table 2 – Study types and mean MMAT scores.

<table>
<thead>
<tr>
<th>Study type</th>
<th>Mean MMAT score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-sectional analytic</td>
<td>3.5</td>
</tr>
<tr>
<td>Descriptive incidence/prevalence</td>
<td>3.3</td>
</tr>
<tr>
<td>Mixed Methods (embedded design)</td>
<td>3</td>
</tr>
<tr>
<td>RCT</td>
<td>4</td>
</tr>
<tr>
<td>Qualitative descriptive</td>
<td>3.4</td>
</tr>
<tr>
<td>Qualitative phenomenology</td>
<td>2</td>
</tr>
</tbody>
</table>

**MMAT, Mixed Method Appraisal Tool.**

### Table 3 – Definitions of child migrants.

- **Self-identified as from another country**
- ‘Natives’ or nationals of other countries
- Nationals of another country—excluding those with dual nationality
- Born outside of the host country
- Born outside of the host country with at least one parent born outside the host country
- Born outside of the host country and both parents born outside the host country
- Born in a non-Western country and both parents born in non-Western countries
- Newly arrived non-native language speakers
- Reverse migrants: formerly resident in country A (either born in country A or born in country B) and migrated to country B

### Table 4 – Destination countries.

- Albania
- Austria
- Belgium
- Denmark
- Germany
- Italy
- Norway
- Portugal
- Spain
- Sweden
- Switzerland
- The Netherlands
- UK

Comparisons between two or more countries:
- The Netherlands and Belgium
- Spain and Portugal
- Denmark, Germany, Greece, Iceland, Ireland, Italy, The Netherlands, Spain, the US, Wales

ethnic community that is already well established within the host country. Whether through choice, economic hardship or segregation, Sarasa-Renedo et al. also point out that migrant young people’s ‘less frequent socialisation in leisure environments and less association with substance-using peers’ (compared with young people born in the host country) may also be an important protective factor.

**Diet, eating disorders and overweight**

Four articles reported data relevant to this theme, of which three present findings from a survey of 13- to 17-year olds in Madrid, Spain. The diets of these young migrants adhered

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articles do not report on age differences; however, Hodes et al. note that older unaccompanied children in their sample showed more PTSD symptoms than younger unaccompanied children. In contrast, Jensen et al. found no age-associated differences in PTSD symptoms. Boys tend to dominate in samples of RAS children, making the influence of gender on PTSD risk difficult to determine with confidence. Findings are contradictory, with reports of no gender difference and of higher prevalence among girls. Stress, anxiety and depression are also of notable concern among RAS children and have been reported to be more prevalent among girls than boys. High levels of anxiety and depression are common among newly arrived RAS children. These cumulative stressors, alongside discrimination against RAS populations, may explain the worsening of mental health issues for some RAS children over time.

Psychosocial well-being is also of concern in the broader population of migrant children. In general, migrant children have poorer mental health than their indigenous peers. Stress, anxiety and depression in non-RAS children are strongly influenced by psychological adaption within the host country. Two key factors have been argued to mitigate against migrant children’s psychological adaption, the experience of cultural dissonance and belonging to a devalued migrant group within the host country. Whether or not age and gender mediate this process within the broader migrant population is, however, contested. While gender differences were not found in some studies, others note higher rates of mental health problems among girls than boys, although as Steinhausen points out, as with RAS children, psychosocial difficulties tend to manifest differently in the broader migrant population, with girls experiencing more internalising problems and boys experiencing more externalising problems. Similarly, no age differences in mental health problems or psychological adaption are reported for some studies, while Neto notes that older return migrants experienced significantly more mental health problems than did younger return migrants. Briones et al. also report that older children are more likely to have poor adaptation, as are more recent arrivals. However, where there are high levels of perceived discrimination, adaptation may not improve over time when young people feel excluded from peer activities and from social life.

Importantly, not all migrant children experience poor mental health outcomes, and the resilience and coping strategies of some RAS and other migrant children are acknowledged by a number of authors. However, research, such as that undertaken by Hodes et al., which focusses directly on resilience, is rare. Factors that promote mental health among migrant children may be the obverse of those that challenge mental well-being. In particular, the ability to participate in social activities and in schooling allows children to build up their social capital and develop a sense of belonging within the host country. Having a secure home is highlighted by a number of authors as an important protective factor, providing a base from which young people can make a successful transition to living in the host country.

Children’s views and experiences of health and health services

Eight articles reported material of relevance to this theme, six of which present findings from the UK. Both Chase and Svensson reflect on the reluctance of migrant children to discuss their health, or the health of their siblings, suggesting that this may be largely due to the stigma associated with their status as migrants. However, where self-reports are available, these note high levels of ill health and unmet healthcare needs. For example, describe high levels of health complaints among migrants in the UK, associated with both chronic and recent-onset conditions. In Sweden, self-reported health is noted to be considerably poorer for boys born outside of Europe than boys born in Sweden. Experiences of health services are often unsatisfactory for RAS children: difficulties and delays in registering with General Medical Practitioners (GPs), difficulties securing medical appointments and missed follow-up appointments are reported. Majumder et al. note the potential for dissonance between migrants’ understandings of health issues and those that dominate in their country of residence. They speculate that such dissonance might contribute to the general distrust of the UK health services among RAS children and their poor understanding of available services and of their right to access these. This confusion is also evident among non-RAS migrants, for whom treatment differences between host and home countries, compounded by language barriers, may be contributory factors in the reporting of distrust in health services.

Discussion

This review has considered published research reporting findings derived from data generated directly with child migrants about their health. The research focussed on four broad areas, namely alcohol, smoking and substance use; diet, eating disorders and overweight; emotional, psychological and mental health issues; and children’s views and experiences of health and health services.

It is important to recognise and acknowledge the limitations of this review. First, definitions of migrant status vary substantially, and identifying appropriate data in articles was problematic. Second, the quality of the available evidence varied, and we used a somewhat arbitrary cut-off point of 2, using the MMAT appraisal tool. The authors consider that this enabled inclusion of a breadth of findings, derived from data generated directly with children, while maintaining scrutiny over research quality. Third, the articles included in the review illustrate a clear geographical bias. Of the 43
articles reporting data from single countries, 35 were from Northern (23) or Western Europe (12). This undoubtedly reflects a significant English language bias and an over-representation of research from countries with a tradition of English language publishing (in particular, the UK, Nordic countries and the Netherlands, which together contributed 28 of the 43 [65%) single-country articles in the review). Among the top five receiving countries, Germany (with the highest number of migrants in 2015) was the location for only one article, and although France is also within the top five receiving countries, no studies located in France were identified. Importantly, because of the time required for research to be undertaken and published, this review also does not reflect recent significant migratory trends from conflict countries in Western Asia. Finally, it is difficult to assess the extent to which any selection bias in the studies included in this review might have influenced the findings reported in this article. Diverse recruitment methods were used across the different studies. It is possible that studies that recruited through schools and other organisational contexts (such as RAS support groups) may not have accessed the most hard-to-reach children, who might be expected to have poorer health experiences. While this may have led to underreporting of health issues, by contrast, it is also possible that children who had experienced health issues associated with migration were more invested in commenting on these, raising the contrary possibility of overreporting.

A notable finding from this review is the relative paucity of research reporting children’s own perspectives and experiences. The principle reasons for article exclusions were all associated with a lack of clarity about children’s own migration status. The largest number of exclusions was related to articles that inferred children’s migration status from parental migration status or which did not specify a migration status for the children. Furthermore, a number of articles reported collated data from migrant and non-migrant children. Vathi and Duci point out that ‘the inclusion of children in migration research contests a tradition in which children have been considered as just an appendage to (the migration of) adults.’ This tradition renders children largely invisible in a significant proportion of migration research. Spallek et al. point to the importance of factors that can influence the health of migrants in the country of origin, during migration and in the host country. Where children’s own migration trajectories are unclear or parents’ experiences stand as proxies for children’s, the significance of their own premigration factors and those encountered during the migration journey, as well as in the host country, is also obscured. Such a focus has particular implications for unaccompanied child migrants. However, parents, indeed adults in general, do not necessarily make good proxies for children, as has been evidenced in other areas of health research. Scott, for example, has pointed out that proxy information is clearly inadequate when children’s own viewpoints are being sought, and adult and child perspectives may vary to an important degree. Although this article considered data generated with children and did not seek to compare children’s and adults’ perspectives on health, there are, nevertheless, indications that adult and child migrants’ views may similarly diverge. Neilson et al. for example, reported that adults underestimated the effect that migrant children’s emotional and psychological difficulties had on their daily lives, with children identifying these as much more burdensome than did teachers.

Where research has accessed migrant children’s own perspectives on, and experiences of health, the dominant designs used have been cross-sectional surveys and incidence and prevalence studies. These can and do enable many children to comment on their own lives and experiences, but responses are often limited through the use of closed- or fixed-choice response categories. It is notable that only one mixed methods and eight qualitative studies were included in the review. Given migrant children’s reluctance to discuss their health, which was noted by both Chase and Svensson et al., there would appear to be an ongoing need to augment quantitative research with detailed, sensitive and child-focused qualitative research, which enables children to engage fully in the research process and to voice the experiences and concerns that are important to them.

Moreover, it is clear that research that has, to date, sought to access and illustrate migrant children’s perspectives has focussed on a restricted number of health issues and in some cases, has been highly localised. Research reporting children’s views and experiences of health and health services, for example, derives predominantly from the UK. While this evidence suggests a need for greater emphasis, in both policy and practice, on the monitoring of migrant children’s health, further research is required to understand whether difficulties and delays in accessing services are also evident in other healthcare contexts.

The overwhelming majority of research that has generated health-related data with, rather than on, migrant children has been concerned with mental health and psychosocial adaptation of migrants, with a strong focus on RAS children. Much smaller bodies of literature were available to illustrate health-related factors associated with lifestyle issues including the use of alcohol, tobacco and other substances, diet nutrition and overweight (predominantly located in Spain) and understandings and use of health services. The absence of significant bodies of work examining other health issues from the perspectives of children is noteworthy. For example, during the early phase of the literature review, we had noted work examining the oral health of migrant children and an article examining the oral health of migrant children and an association between children’s immigration status and dental ill health but could identify no reporting of children’s own perspectives. Similarly, despite the acknowledged high risk faced by young migrants of gender-based and sexual violence, we were unable to identify relevant research focussing on sexual health issues. Furthermore, although Child et al. argue that the challenges faced by children with disabilities ‘increase in scale and may become Sisyphean if the necessary supports and responses are not in place’ (p.8); research exploring their perspectives seems not to be available.

Where self-reports are available, however, these suggest high levels of ill health and unmet healthcare needs among some groups of migrants. Although estimates of the risk of PTSD in RAS children vary between studies, there is consensus that PTSD symptoms increase with the number of traumatic events experienced before and during migration.
Levels of depression and anxiety are also generally higher among young migrants than indigenous peers. The significance of social and community factors in the host country was highlighted in all mental health studies, which draw attention to the challenges posed for those child migrants who experience discrimination and social exclusion, who have limited if any control over their day-to-day lives and who struggle to maintain a coherent sense of identity and purpose.21,29,32,34,35,40,46,49,54 It is, of course, noteworthy that for some cultural groups, host countries have become considerably less welcoming to migrants over recent years,13,20,63 suggesting that perceived discrimination and psychological adaptation by child migrants may become even more challenging. Discussing young people’s mental health as a global public health issue, Patel et al.64 argue

‘The key to promoting youth mental health is through strengthening of the fundamental nurturing qualities of the family system and community networks while explicitly acknowledging the rights of young people. Such action would mean recognition of families and communities as major players in determining the mental health of young people. Young people themselves must be at the centre of all policy-making, focusing on their concerns’ (p.1310).

This contention would seem to have particular resonance for populations of migrant children within host countries, both as a supportive strategy for promoting mental health and for promoting migrant engagement with healthy lifestyles. Cultural and religious norms and attitudes have been argued to underwrite differences between the health behaviours of some groups of migrant children for whom protective cultural practices may be maintained throughout the migration process. A key example is the lower rates of alcohol use for young people from Muslim families and for those from countries of origin with relatively low rates of drinking.11,28 These patterns have been reported elsewhere.65–67 Social and community integration, and religious and community norms, may, therefore, act as protective factors for young migrants, mediating stressors during the acculturation process as children adapt within their host countries.

However, as some authors are at pains to point out, not all child migrants experience mental health problems and not all migrants experience the detrimental health outcomes associated with unhealthy lifestyle practices. Yet, despite research such as that undertaken by Hodes et al.21 and Groark et al.,14 which focuses directly on resilience, there are limited insights into the factors that are important to migrant children in helping them overcome adversity. Hodes et al.21 described factors that might ameliorate the effects of trauma on unaccompanied asylum-seeking children and thereby drew attention to individual resilience. However, as Almedom and Glandon10 have pointed out, resilience is not just the absence of PTSD and, furthermore, although resilience is often considered in terms of the ‘innate qualities and differences in an individual that enable them to overcome adversity’69(p.4), in reality, resilience is multidimensional, manifesting at the intersection of the ‘personal, biological and environmental or systemic’10(p.258).

In conclusion, this review has clearly demonstrated the need to make more visible what is currently largely invisible; migrant children’s perspectives on their experiences of health. This will require further child-focussed research which gives voice to migrant children in order that more nuanced insights are available into the complex, multidimensional factors that contribute to health and ill health and which intersect to promote resilience within this diverse population.

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Competing interests

We declare no competing interests.

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