Interventions targeting the wellbeing of young people of migrant and refugee backgrounds: A systematic review of the literature

International migration is on the rise and has led not only to a steady but a significant increase in the number of migrants, refugees, asylum seekers[1] and forcefully displaced persons[2], pursuing opportunities in immigrant-receiving western industrialised countries (Bates-Eamer, 2019; Udah, Singh, & Chamberlain, 2019). For many people, who have either voluntarily or been forcibly moved from their homelands, their new destination countries are lands of opportunity, where hard work, in the long run, can bring a better life (Markus, 2016). Of the 272 million international migrants worldwide, as of December 2019, 30.9 million were aged 15 to 24[3], equating to 11.4 per cent of the total migrant population (United Nations, 2019).

International migration may impact young people's lives in a positive way, such as encountering new opportunities for education and employment, personal development, or the acquisition of new skills and competencies (United Nations, 2016). However, many factors such as employment, wars, conflict, fear of persecution, poverty, including famine and/or other climatic and natural disasters are influencing the decisions of many people, including young people, to migrate and cross international borders (Bates-Eamer, 2019). For young refugees and asylum seekers, the migration process often bears particular challenges such as not having access to basic social services and/or a lack of social protection. Hence, depending

[1] Migrants, specifically economic migrants, are people who move or cross borders voluntarily on their own volition to seek new opportunities. However, refugees or asylum seekers are political or forced migrants who have a well-founded fear of being persecuted based on race, religion, nationality, ethnicity, or membership of a particular social or political group (United Nations High Commissioner for Refugees, 2010)

[2] Forced displacements occur when people are forced to move from their homes because of conflict, violence, fear of persecution, and/or disasters (Bates-Eamer, 2019).

[3] The United Nations defines youth as "those persons between the ages of 15 and 24 years, without prejudice to other definitions by Member States." Based on the UN definition of youth, the assumption would be that only persons under the age of 15 are children.

on the policies and processes supporting these young people, the migration experience can be an opportunity or a risk to their development (United Nations, 2016).

Young people represent a large group of humanitarian migrants, such as refugees, asylum-seekers and unaccompanied minors (United Nations, 2019). On a structural level, the exclusionary nature of citizenship and the role of the state (polity) in constructing Otherness can cause increased vulnerability for many young people (Udah, 2019). However, the most vulnerable group are those young people who have experienced trauma through war and are forced to leave their homelands unaccompanied (Miller, Kulkarni, & Kushner, 2006). Disruptions or limitations to their education resulting from these experiences may leave them with low language and literacy skills (Miller, 2009). During the settlement in the host country, young migrants may face bullying, discrimination, and racism at school which compounds their issues with identity and belonging (Correa-Velez, Gifford, & Barnett, 2010). A lack of language proficiency and inadequate educational support complicate these challenges even further (Paudyal, Patel, & Gilchrist, 2018; Ziaian, de Anstiss, Puvimanasinghe, & Miller, 2018). Young migrants are also confronted with dominant societal ideologies about assimilation and homogenisation, putting pressure on them to either mould identities that conform to the norm or face being excluded (Blackledge & Pavlenko, 2001; Piller, 2016). Such pressures can cause high levels of acculturation stress, placing young people at risk of developing symptoms of depression, anxiety disorder, and Post Traumatic Stress Disorder (PTSD) (Wong, Chang, & He, 2009).

Migration also has a transgenerational effect on young people. Even young people with a second- or third-generation migrant background can experience the long-term impacts of acculturation stress, resulting in lower mental health and general wellbeing (Kouider, Koglin, & Petermann, 2014; Nguyen, Rawana, & Flora, 2011). While other studies found no

difference in mental health status between first- and second-generation children of immigrants (Bridges, de Arellano, Rheingold, Danielson, & Silcott, 2010; Lara-Cinisomo, Xue, & Brooks-Gunn, 2013), the time of the mother's immigration has shown to have a bearing on their children's acculturation (Kouider et al., 2014). Children whose mothers arrived at the age of 22 and older showed lower sociability and higher levels of behavioural problems (Kouider et al., 2014). Such variable findings indicate that migration itself may not be a risk factor for mental health problems in second and subsequent generation young migrants – it may be the migration background, for example, acculturation problems of parents, feelings of acceptance, exposure to racism and discrimination, which is the source of risk (Kouider et al., 2014).

Indeed, the wellbeing of young migrants and refugees depends on a fine balance of support. Their families, friends, the ethnic, and the wider regional community, are all valuable sources of resilience and assistance in dealing with issues such as language barriers, lack of employment opportunities, and difficulties accessing further education (Joyce & Liamputtong, 2017). Such support structures not only help young people to cope with these issues, but they also strengthen their social capital and enhance their wellbeing (Joyce & Liamputtong, 2017). However, while family support can be a positive influence on this group's wellbeing, conversely, changing family dynamics can pose a threat to their wellbeing and successful settlement (McMichael, Gifford, & Correa-Velez, 2011). Hence, as young people are the building blocks of any society, providing timely and adequate support during the formative years of migrants and refugees has the potential to elevate their wellbeing to a level that allows them to make valuable contributions to their societies.

Drawing on the existing literature, a new synthesis of current evidence-based wellbeing promotion approaches for young migrants and refugees is warranted for a few

reasons. Firstly, a large proportion of existing reviews are conceptual and descriptive, with a limited focus to specific migrant issues, populations, or settings (Barrie & Mendes, 2011; Botfield, Newman, & Zwi, 2016; Connor, Page Layne, & Ellis Hilb, 2014; Demazure, Gaultier, & Pinsault, 2018; Ehntholt & Yule, 2006; Nocon, Eberle-Sejari, Unterhitzenberger, & Rosner, 2017; Streitwieser, Loo, Ohorodnik, & Jeong, 2018; Sullivan & Simonson, 2016; Tyrer & Fazel, 2014; Vossoughi, Jackson, Gusler, & Stone, 2018). Secondly, there are insufficient numbers of rigorously designed and executed systematic reviews that also include a transparently reported study quality appraisal (Borsch et al., 2018; Botfield, Newman, Lenette, Albury, & Zwi, 2018; d'Abreu, Castro-Olivo, & Ura, 2019; Nakeyar, Esses, & Reid, 2018; Van Os, Zijlstra, Knorth, Post, & Kalverboer, 2018). Thirdly, none of the reviews specifically examine whether interventions were co-designed and therefore incorporated stakeholder's views in the design of the study.

This systematic review seeks, therefore, to provide a comprehensive overview of the recent and relevant literature on tested, effective and evaluated wellbeing promotion interventions or approaches for young people of migrant and refugee backgrounds. Apart from internal migrants who cross borders within their own country, we included all young people who have been forced to leave their home countries and arrive as refugees, asylum seekers, displaced persons, victims of trafficking or human smuggling, or illegal migrants; those that volunteered to move to the host country as either temporary, circular or permanent labour migrants; or for reasons of family reunification or education; and young people who have been moved by their parents, or with their families for economic migration. Thus, first and subsequent generation young migrant people are included in this review.

Looking at the concept of wellbeing from a whole-of-body-and-mind experience and guided by the World Health Organisation (2014) definition of mental health, we define

wellbeing as a good balance between mental, physical, emotional, and spiritual health. To have arrived at optimal wellbeing, a person is not only free from disease, but their basic human needs are also met, and they have the skills to behave in ways that promote their wellbeing. Wellbeing is the cornerstone of a fruitful and productive life, where people can maximise their potential and make meaningful contributions to society (World Health Organisation, 2014). Thus, from the studies reviewed in this paper, we highlight interventions or programmes designed for wellbeing promotion among young people with migrant and refugee backgrounds.

Methodology

This review specifically aims to provide an overview of the range, effectiveness, and impact of wellbeing promotion programmes and interventions provided to young migrants and refugees, and the methodological quality of the studies reviewed. In conducting this review, we also sought to know whether the support received was adequate in terms of user needs and what groups of young migrants and refugees, if any, missed out on receiving wellbeing promotion support. To ascertain whether a new systematic review on migrant wellbeing interventions was warranted, we a) conducted a scoping search on existing literature reviews, and b) searched the PROSPERO database for any planned reviews on this topic. Once we established the gap in the literature, we worked to reach consensus on a research protocol and then registered it (PROSPERO CRD42019135119) before proceeding with the review. The review was guided by the following questions: What are the characteristics of existing wellbeing promotion programmes for young people of migrant and refugee backgrounds? What are the reported outcomes of these programmes? What is the methodological quality of the studies?

Inclusion/exclusion criteria

We included peer-reviewed and grey literature papers that focussed on young migrants and refugees aged 12-24, published in the English language between 2000 and 2019. These papers must have either tested or evaluated the effectiveness of interventions or programmes aimed at improving young migrant and refugee's physical and mental health and social, emotional and economic wellbeing. We excluded conceptual, descriptive, or non-evaluative papers; papers that exclusively focussed on early childhood, pre-school, primary school children, adults; and papers that were concerned with the period before leaving the home country or focussed on internal migration.

Search strategy

An experienced librarian in the field of the social sciences assisted in establishing a sound search strategy. The following databases were searched: Informit, ProQuest, Scopus, Emerald Insight, Sage, and Wiley, plus Google Scholar. The search string consisted of some or all of the following terms, and was tailored to the specific requirements of individual databases/search engines: young OR "child and youth" OR adolesc* OR "unaccompanied minors" AND migrant* OR refugee* OR asylum* AND wellbeing OR well-being AND intervention* OR program* OR course* OR support OR development OR "skills development" OR group*

Data management and study selection

Author One (MH) exported all results from the database searches into the referencing management software program Endnote. Additionally, entries from grey literature searches and reference list checks were created in Endnote and then duplicates removed. All steps of this process were documented in an Excel spreadsheet to ensure transparency and replicability. The initial screening of titles, and in some cases abstracts, to determine relevance was conducted by three co-authors (AA, MH, NP). One author (MH) determined

eligibility against the inclusion criteria; this was cross-checked by two authors (AA, NP) and any queries and disagreements discussed amongst all three until consensus was reached.

Data extraction and analysis

One author (MH) extracted the data on study characteristics using a pre-designed data collection form. A second author (NP) cross-checked all reported outcomes and discussed any disagreements with Author One until consensus was achieved. Study characteristics were described and presented in tabular form. Reported outcomes were thematically analysed and presented in narrative form (Table 1).

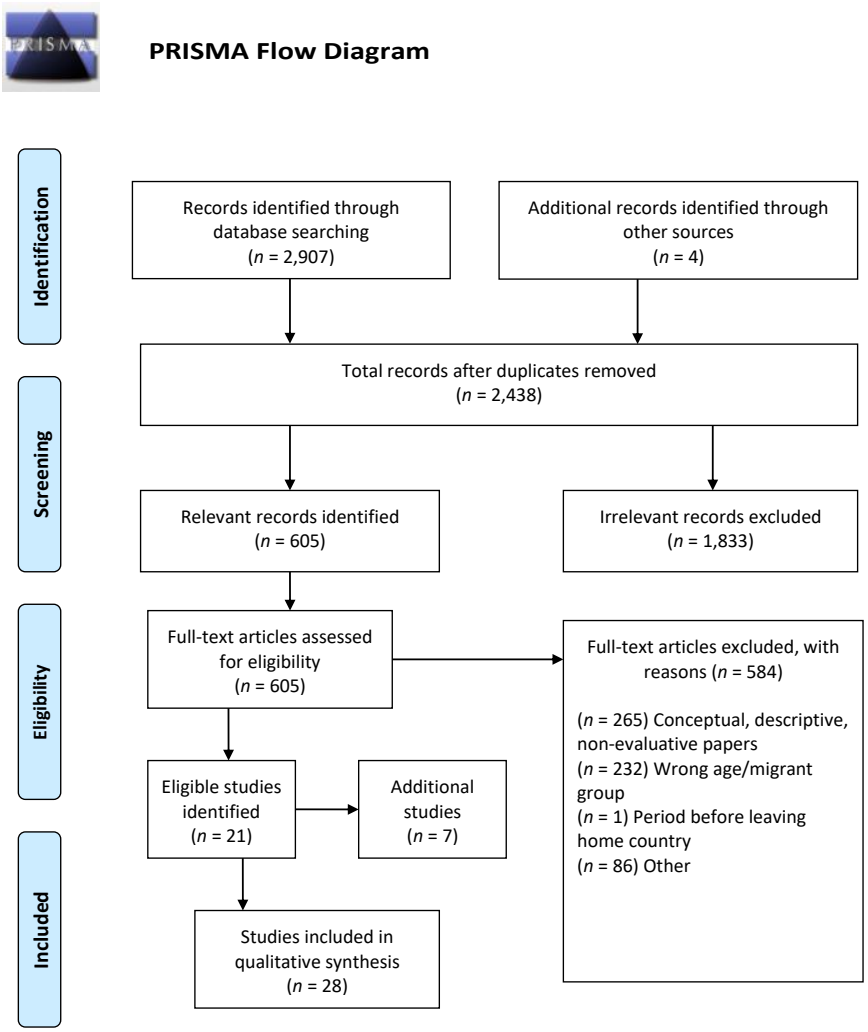
Quality appraisal

The methodological quality of the included intervention studies was independently assessed by two authors (MH, NP) using two different tools according to the study type. Results were compared and discussed until consensus was achieved. Quantitative research studies were assessed with the Effective Public Health Practice Project (2009) (EPHPP) Quality Assessment Tool for Quantitative Studies. The EPHPP tool consists of eight components of rating: selection bias, study design, confounders, blinding, data collection methods, withdrawals and dropouts, intervention integrity, and analyses. Qualitative research studies were subjected to the Critical Appraisal Skills Programme (2018) (CASP) Qualitative Research Checklist. The CASP tool assesses the applicability, reliability and validity of published qualitative research according to a series of ten questions concerned with the aim of the research, methodology, research design, recruitment strategy, data collection, relationships between researcher and participants, ethical considerations, data analysis, findings, and the value of the research. Studies that used mixed methods were assessed with both tools, respective to their quantitative and qualitative components.

Results

Our database and additional searches returned a total of 2,911 records. After the removal of 473 duplicates and 1,833 irrelevant items, we accessed the full texts of 605 papers to determine their eligibility for inclusion in our review. Of these 605 papers, 584 papers were excluded for the following reasons: (n=265) conceptual, descriptive, non-evaluative papers; (n=232) wrong age/migrant group; (n=1) concerned with the period before leaving home country; and (n=86) other. The manual searching of reference lists of relevant papers resulted in another seven studies, bringing the total to 28 included peer-reviewed studies (Figure 1).

Figure 1 Prisma Flow Diagram



Characteristics of the wellbeing promotion studies

Of the 28 studies meeting inclusion criteria, 17 were published between 2011 and 2019, and 11 from 2000 to 2010. The majority of studies originated from Australia (n=8), followed by six from the USA, three from the UK, and one each from Iran, Germany, Sweden, Canada, and India. Two studies were collaborations between Uganda and Germany (n=1) and Uganda and Italy (n=1). Included studies covered a range of designs, including three RCTs, one non-randomised controlled trial (CT), one cohort analytic study, ten case control studies, twelve cohort studies, and one case study. These studies reported school, community, hospital, or refugee settlement-based interventions aimed at the improvement of psychosocial functioning, classroom behaviour, school performance, acculturation and integration in general career education, and the economic empowerment of young people with a migrant or refugee background. None of the studies reported on collaborations with stakeholders during the design stage of their interventions.

Approaches and reported outcomes

The types of outcomes described centre around improving young migrants' psychological and emotional wellbeing, economic empowerment, and education and employment outcomes. These outcomes are organised by the different approaches employed including music, arts and sports programmes; empowerment and skills training; psychological therapies; and combinations of strategies and services.

Music, arts, sports

Eight (n=8) studies assessed programmes that utilised either music, the arts, writing, or sport to support young migrants in their acculturation and settlement. An extra-curricular music and arts therapy programme was provided over a period of seven months to newly arrived immigrants and refugees in Australia. Participants reported an increased feeling of

belonging to communities of practice within the school and to the wider Australian community, as well as to a global music community (Marsh, 2012). Similarly, a music practice intervention comprising guitar lessons, singing, participant performances and group discussions, provided to youths in a refugee camp over a period of five weeks, proved to have positive effects as participants reported an increased sense of wellbeing and emotional expression, improved social relations, self-knowledge, positive self-identification and a sense of agency (Millar & Warwick, 2019).

A school-based, expressive arts and learning programme, called HEAL, that included arts and music therapy activities as well as lessons on self- and cultural identity, showed positive effects on the internal and external behaviour of adolescents with a refugee background. While the results included moderate effect sizes for the reduction of behavioural difficulties, emotional symptoms, hyperactivity, and peer problems, authors suggested significant effect sizes were possible if a larger sample was used (Quinlan, Schweitzer, Khawaja, & Griffin, 2016).

Another music therapy intervention, aimed at improving classroom behaviour, resulted in significant changes over time for externalising behaviour, with reference to hyperactivity and aggression, but not for school problems or adaptive skills. Findings or trends regarding internalising behaviour, such as anxiety, depression and somatisation, were non-significant (Baker & Jones, 2006). While a one-year drama therapy programme reported no improvements in self-esteem or emotional and behavioural symptoms, participants in the intervention group did score lower mean levels of perceived impairment in terms of friendships, home life and leisure activities. However, both groups showed significant increases in mathematics performance and improved oral French expression, which may be

linked to the students' self-reported perception of decreased impairment which in turn improved their learning ability in these two domains (Rousseau et al., 2007).

A brief 'writing for recovery' intervention showed positive short-term results in the processing of grief with a significant decrease in the total score of TGIC symptoms in the treatment group, while the scores in the control group increased slightly (Kalantari, Yule, Dyregrov, Neshatdoost, & Ahmadi, 2012). An Australian holistic sport-for-development program impacted positively on young refugees' health and wellbeing. The study showed effectiveness in promoting cross-cultural relationships and building peer and pro-social relationships and behaviour. Results included higher levels of other-group orientation, lower scores on peer problems, and significantly higher scores on pro-social behaviour in participants of the treatment groups, with particular reference to boys (Nathan et al., 2013).

The 'Advancing Adolescents programme' that included sessions of fitness activities, arts and crafts, vocational skills, technical skills, and language skills, First Aid, and the design of community development project plans to build social capital, sustained positive effects on human insecurity for both groups over 11 months. Other results included medium to small effect sizes on distress and perceived stress. No programme impacts were found for prosocial behaviour or posttraumatic stress reactions, however, beneficial impacts were stronger for youth with exposure to four trauma events or more (Panter-Brick et al., 2018).

Empowerment and skills training

Five studies (n=5) were concerned with empowerment/skills training programmes, provided either at schools, community halls, youth centres, or refugee camps. Three of them focussed on young people only (Al-Rousan et al., 2018; Hughes & Scott, 2013; Yankey & Biswas, 2012), while one was aimed at empowerment of the whole family (Stark et al., 2018). In terms of social and economic empowerment, a four-year study that assessed the

effects of a full university tuition and monthly living stipend for youth located in a refugee camp provoked measurable positive effects on feelings of peace, security and wellbeing; improvements in academic access, financial resources and the psychosocial health of their family and community (Al-Rousan et al., 2018). In contrast, a larger-scale social empowerment programme to reduce girls' economic vulnerability, provided in a refugee camp in Ethiopia, found no difference between both groups in any of the domains 10 months after the intervention. Over 10 months, the girls met weekly to discuss varying topics, including interpersonal disagreement resolution, reproductive health, gender norms, safety planning, and how to manage money effectively. The intervention did not keep girls in school, nor influence girls not in school to return to their education, work for pay, or not engage in transactional sexual exploitation (Stark et al., 2018). The authors concluded that stand-alone social empowerment programmes may not be adequate in reducing economic vulnerability for adolescent girls, and suggested to either simultaneously implement such interventions with economic empowerment programmes or allow for additional measures that address broader structural barriers (Stark et al., 2018).

A life skills training programme by Yankey and Biswas (2012), to empower children to better resolve conflicts, showed positive results on stress experienced in varying life situations. For example, cognitive life skills, such as creative and critical thinking, significantly contributed to reducing stress related to school. Improved social skills, such as effective communication and empathy, were better predictors of reduced school stress, future stress and leisure stress. Decision-making and critical thinking were significant predictors of reduced self-stress (Yankey & Biswas, 2012). A programme aimed at promoting positive family skills and interaction showed positive results in the reduction of externalising behaviour and child attention problems and a significant increase in protective psychosocial

factors, however, no significant effects on children's internalising problems were reported. At the 6-month follow-up caregivers reported maintained improvement on attention and externalising problems, and children reported maintained improvement on externalising problems and protective factors. Caregivers reported that female children showed significantly more internalising problems than male children (Annan, Sim, Puffer, Salhi, & Betancourt, 2017). A small study by Hughes and Scott (2013) assessed the usefulness of a career education intervention for refugee or humanitarian entrant students. The intervention improved their job interview skills and contributed to a better understanding of how to get a job in Australia, including knowledge of resource persons to assist with varying career concerns. Despite a trend towards, the career intervention did not significantly influence vocational identity or career choice certainty (Hughes & Scott, 2013).

Psychological therapies

Seven studies (n=7) examined the effects of varying types of psychotherapeutic interventions. These interventions comprised targeted therapies such as cognitive behavioural therapy (CBT), eye movement desensitisation reprogramming (EMDR) and narrative exposure therapy (NET). Findings across the three studies on the FRIENDS programme that utilised CBT revealed consistent results (Barrett, Moore, & Sonderegger, 2000; Barrett, Sonderegger, & Sonderegger, 2001; Barrett, Sonderegger, & Xenos, 2003). While internalising symptoms, including anxiety levels, decreased, greater levels of self-esteem, improved future outlook and lower levels of hopelessness were reported in participants in the treatment groups. These outcomes were sustained at six-month follow-up (Barrett et al., 2000; Barrett et al., 2001; Barrett et al., 2003). Another trauma intervention based on CBT sessions resulted in a significant decrease in overall PTSD symptom severity and intrusive PTSD symptoms, significant improvements in students' overall behaviour and emotional

symptoms, however, post-treatment improvements were not maintained at two-month follow-up (Ehntholt, Smith, & Yule, 2005). Based in a psychiatric hospital unit, a trauma focusing therapy that comprised of 'Eye movement desensitisation and reprocessing' (EMDR) was combined with conversational therapy for adolescents and play therapy for children younger than 13 years. The authors reported increased levels of functioning that correlated with reduced posttraumatic stress systems (that are not specific to the disorder) and depression symptoms. However, the same results were not found for the symptoms specifically related to PTSD (Oras, Ezpeleta, & Ahmad, 2004). Positive results were reported in both studies that assessed the effectiveness of KIDNET, a Narrative Exposure Therapy to reduce symptoms of PTSD and better process events and their consequences, applied to a small sample of Somali children residing in a refugee camp. PTSD symptoms were either reduced to a third of the original score, were considered borderline, or reduced to zero. Symptoms of avoidance, intrusion, or hyperarousal were also reduced to zero in the case study of one individual (Onyut et al., 2005; Schauer et al., 2004).

A combination of strategies/services

Eight studies (n=8) reported on programmes or services that provided a range of strategies to improve the mental and psychosocial health of young refugees. A school-based mental health service that offered help with relationship-building, outreach services, comprehensive clinical and case management services, CBT, relaxation techniques, supportive therapy, and psychoeducation, that was evaluated over three years, linked positive results with greater quantities of strategies applied (Beehler, Birman, & Campbell, 2012). For example, greater quantities of CBT and supportive therapy increased functioning, greater quantities of coordinating services decreased symptoms of PTSD, and TF-CBT services were associated with both improved functioning and PTSD symptoms (Beehler et al., 2012). The

SHIFA Project, a multi-tiered programme that provided broad-based prevention and community resilience building to the community and parents, more targeted, school-based prevention and stress-reduction interventions to an identified at-risk group, and intensive intervention for those with significant psychological distress, reported overall improvements in mental health and resources across all tiers. Children with higher mental health needs were appropriately matched with higher intensity services. Significant improvements in symptoms of depression and posttraumatic stress disorder were reported in top tier participants, correlated with the stabilisation of resource hardships. This programme was assessed over a one-year period (Ellis et al., 2013).

Similarly, another mental health service that provided a range of strategies including family work (with or without the child), individual therapy (psychodynamic, supportive), and group work (for the children/adolescents or parents) with additional in-home and crisis intervention work, reported positive results on the hyperactivity score in all refugee children in the treatment group (Fazel, Doll, & Stein, 2009). Albeit Fazel et al. (2009) investigated children and young people between the ages 5 and 18, we included their study because 57 per cent of the participants were aged between 10 and 18 and their design controlled for age and gender confounders, which enabled us to focus on the findings associated with our age range of interest. Those children that displayed a wide range of emotional and behavioural problems, and were directly seen and treated by the service, also showed improved scores in peer problems. This service was assessed over one year (Fazel et al., 2009). A group-based mental health intervention for unaccompanied minors, that offered psychoeducation, information on wellbeing, coping resources, the tree of the future exercise, and topics identified by participants, such as sleep, pain, intimate relationships, emotions, and anger, found no effectiveness of the intervention on the mental health of participants. However, the

authors noted that engagement with the immediate social environment and taking part in daily activities was associated with improved wellbeing (Garoff, Kangaslampi, & Peltonen, 2019). Another group-based intervention aimed at improving participants' feelings of safety, stabilisation, anxiety and stress management, and building emotion regulation skills and trauma education, reported significantly improved long-term life satisfaction and hope for the future (Meyer DeMott, Jakobsen, Wentzel-Larsen, & Heir, 2017). A short-term psychosocial support programme over 12 weeks, that offered a combination of individual, family, and group sessions on trauma- and grief focusing therapy, verbalising techniques, relaxation techniques, painting, playing, acting, and fantasy journeys, discussions, and psychoeducation about trauma and trauma reactions, showed significant improvement in psychosocial functioning, reduction in posttraumatic, anxiety and depressive symptoms, and reduction in PTSD diagnoses. No change was recorded in the number of patients with PTSD that had a high rate of comorbid symptoms (depression and anxiety) as well as a history of severe traumatisation (Möhlen, Parzer, Resch, & Brunner, 2005). A manualised group intervention based on TF-CBT and varying other strategies, for example, EMDR, sleep hygiene, relaxation, breath control, drawing, writing, and self-regulation reported significant decreases in PTSD and depression symptoms (Sarkadi et al., 2018). A mindfulness-based intervention based on mindfulness exercises, yoga, meditation, and psychoeducation reported medium effects on the reduction of negative affect and the improvement of positive affect and large effects on the reduction of symptoms of depression. Participants who completed the training made use of the mindfulness exercises as a new coping strategy in combination with other familiar coping strategies (Van der Gucht, Glas, De Haene, Kuppens, & Raes, 2019).

The methodological quality of the included studies

The quality appraisal comprised of 19 quantitative, two qualitative, and seven mixed methods studies. As previously mentioned, quantitative studies were scored with the EPHPP tool, qualitative studies with the CASP tool and studies that employed mixed methods were scored with both tools, respectively (Table 2).

Quantitative studies

The assessment of the quantitative research studies (n=19) with the EPHPP tool resulted in three studies scoring strong (Ellis et al., 2013; Kalantari et al., 2012; Rousseau et al., 2007), seven moderate (Baker & Jones, 2006; Barrett et al., 2000; Meyer DeMott et al., 2017; Möhlen et al., 2005; Panter-Brick et al., 2018; Quinlan et al., 2016; Stark et al., 2018), and nine scoring weak (Barrett et al., 2001; Barrett et al., 2003; Beehler et al., 2012; Ehntholt et al., 2005; Fazel et al., 2009; Onyut et al., 2005; Oras et al., 2004; Schauer et al., 2004; Yankey & Biswas, 2012). The scores were achieved by the following EPPHP global rating scale of: Strong = no weak ratings, Moderate = one weak rating, Weak = two or more weak ratings.

Among the studies that achieved a moderate overall score, the areas where they performed well included a description of whether confounders were being controlled in the design or analysis of the study; the reliability and validity of the data collection tools; and the strength of the study design in terms of bias, for example, existence of a control group and the allocation of participants to both groups. The areas that were rated lower in almost half of the papers in this category (n=9) were: a) whether assessors were described as blinded to which participants were allocated to the treatment and control group, and study participants should have not been aware of the research question (Barrett et al., 2003; Beehler et al., 2012; Fazel et al., 2009; Meyer DeMott et al., 2017; Möhlen et al., 2005; Onyut et al., 2005; Oras et al., 2004; Quinlan et al., 2016; Stark et al., 2018); and b) discussion of the numbers and

reasons for dropouts and withdrawals (Baker & Jones, 2006; Barrett et al., 2000; Barrett et al., 2001; Barrett et al., 2003; Beehler et al., 2012; Ehntholt et al., 2005; Panter-Brick et al., 2018; Yankey & Biswas, 2012) (Appendix A).

Qualitative studies

The assessment of the two (n=2) qualitative research studies revealed very good overall results with both studies rated as strong (Marsh, 2012; Millar & Warwick, 2019). This score was achieved by eight and nine 'yes' scores, respectively. out of a possible 10 (Appendix B).

Mixed methods studies

The assessment of the mixed methods studies (n=7) with the EPHPP and CASP tools resulted in one study scoring strong across both domains (Sarkadi et al., 2018). One study scored strongly on its quantitative and moderate on its qualitative part (Van der Gucht et al., 2019). Two studies scored strongly on their qualitative and moderate on their quantitative part (Al-Rousan et al., 2018; Annan et al., 2017). Nathan et al. (2013) scored strong on their qualitative part, and while they received a weak overall score for their quantitative part, they did demonstrate strength in the domains of selection bias, study design, and data collection methods. Two studies (Garoff et al., 2019; Hughes & Scott, 2013) were rated as moderate in their qualitative part and weak in their quantitative part. However, within that overall weak score for the quantitative part, Hughes and Scott (2013) demonstrated strength in the data collection domain and Garoff et al. (2019) in the four domains study design, data collection, confounders and withdrawal/dropouts (Appendix A and B).

Table 2 Methodological study quality appraisal

Study	Year	Quantitative	Qualitative	Mixed methods	Total score EPHPP	Total score CASP
Al-Rousan	2018			x	Moderate	Strong
Annan	2017			x	Moderate	Strong

Baker	2006	x				Moderate	
Barrett	2000	x				Moderate	
Barrett	2001	x				Weak	
Barrett	2003	x				Weak	
Beehler	2012	x				Weak	
Ehntholt	2005	x				Weak	
Ellis	2013	x				Strong	
Fazel	2009	x				Weak	
Garoff	2019				x	Weak	Moderate
Hughes	2013				x	Weak	Moderate
Kalantari	2012	x				Strong	
Marsh	2012			x			Strong
Meyer Demott	2017	x				Moderate	
Millar	2019			x			Strong
Möhlen	2005	x				Moderate	
Nathan	2013				x	Weak	Strong
Onyut	2005	x				Weak	
Oras	2004	x				Weak	
Panter-Brick	2018	x				Moderate	
Quinlan	2016	x				Moderate	
Rousseau	2007	x				Strong	
Sarkadi	2018				x	Strong	Strong
Schauer	2004	x				Weak	
Stark	2018	x				Moderate	
Van der Gucht	2019				x	Strong	Moderate
Yankey	2012	x				Weak	

Discussion

This systematic review examined interventions aimed at improving the wellbeing of young people with migrant and refugee backgrounds from around the globe. The articles reviewed were mined for evidence of intervention effectiveness, co-design activities, an understanding of whether the support received was adequate in terms of user needs, and whether any groups of migrants missed out on receiving wellbeing promotion support. The studies were subjected to a quality appraisal process to provide transparent information on the strengths and limitations of their study designs. From the articles reviewed, several approaches and interventions with varying effectivity were identified such as expressive arts therapies, a sports programme, empowerment and skills training, psychological therapies, and multimodal approaches, to facilitate integration and promote the wellbeing of young people of migrant and refugee backgrounds. The results indicate the characteristics, reported outcomes and quality of wellbeing promotion programmes provided to young people of migrant and refugee backgrounds. As the findings suggest, young people's sense of

belonging, agency, wellbeing and emotional expression (Baker & Jones, 2006; Ehntholt et al., 2005; Marsh, 2012; Millar & Warwick, 2019; Nathan et al., 2013; Panter-Brick et al., 2018; Quinlan et al., 2016) and academic performance (Rousseau et al., 2007) can be improved by engaging them in extra-curricular programmes such as music, arts and sports programmes; combinations of strategies and services such as empowerment and skills training; and psychological therapies.

The majority of included studies (86 per cent) focussed on young people with migrant and refugee backgrounds who had either recently arrived with their families or had been living in their respective host countries for a while. The remaining four studies focused on unaccompanied minors (Garoff et al., 2019; Meyer DeMott et al., 2017; Sarkadi et al., 2018; Van der Gucht et al., 2019). This scarce evidence base may reflect the recent increase in numbers of this particularly vulnerable group of migrant children observed by the United Nations Children's Fund (UNICEF) and other international organisations (Ustymenko, 2020). In terms of transgenerational integration and adjustment, only one study (Beehler et al., 2012), a school-based mental health service, considered second-generation young migrants in their intervention design. We argue that the lack of representation of this migrant group may be a reflection of the inconsistent findings across the literature on second-generation migrants (Bridges et al., 2010; Kouider et al., 2014; Lara-Cinisomo et al., 2013; Nguyen et al., 2011). Another group worth mentioning are the control groups. Only five of the 16 studies that utilised a control group in their design ensured that these participants also had access to the intervention, either after a short waiting period or when the treatment group had finished. While not being considered for the intervention at all, participants in control groups were seen to have suffered from significant increases in anxiety symptoms (Barrett et al., 2000), decreased self-esteem, a greater sense of hopelessness (Barrett et al., 2001), and slightly

increased scores in grief symptoms (Kalantari et al., 2012). Bearing in mind the challenging circumstances young migrants face and their often, diminished state of mental health, one might ask whether above outcomes would have been preventable if the principle of reciprocity was taken into account during ethical deliberations. To overcome such ethical challenges, the Cochrane Effective Practice and Organisation of Care Group (EPOC) https://epoc.cochrane.org/about-us recommends a multiple baseline design. This type of time-series design seems the most pragmatic for the assessment of complex socio-cultural interventions, such as the migrant and refugee youth interventions included in this review (Hawkins, Sanson-Fisher, Shakeshaft, D'Este, & Green, 2007).

Considering that language acquisition has been acknowledged as a key driver to the social and economic integration of migrants, and employment uptake is associated with increased migrant self-sufficiency and wellbeing (Haque, 2010), we found only a few studies (Hughes & Scott, 2013; Rousseau et al., 2007) that focused on these areas. While the interventions in the reviewed studies targeted mainly humanitarian migrants, we found a scarcity of interventions that focussed on language and employment for young migrants of all backgrounds. Prerequisites to flourishing in a new environment include adequate mental and emotional health and language proficiency, which need to be prioritised in integration efforts for young migrants. In line with Joyce and Liamputtong (2017), we acknowledge and argue that young people who are tied into a close network of family, friends and community have access to important sources of support when dealing with problems such as language barriers, finding employment or accessing further education.

Families are seen as a crucial element, the main cell of social life, and they need to be active participants in the migration process (Lipič, Seljak, Grintal, & Bagari, 2018) to assist young people’s successful acculturation and integration. However, we only found six studies

that included families, caregivers and the community in their intervention design (Annan et al., 2017; Ellis et al., 2013; Fazel et al., 2009; Möhlen et al., 2005; Sarkadi et al., 2018; Stark et al., 2018). The programmes provided a range of support strategies, including family education on trauma; psychosocial support; skills development as a method of prevention or to build resilience in parents; and the promotion of positive parenting skills, communication and interaction. These strategies are good examples of a holistic approach to easing the challenges young migrants face. However, there is a need for a stronger representation of families and communities in future approaches to intervention design targeted at young migrants.

The methodological quality of the studies reviewed varied significantly. Across all studies, none scored consistently strong across all or most of the applied criteria. Weak ratings pertained to intervention integrity, contamination, retention and follow up assessments. Just over half of the studies employed a control group and less than one third randomly allocated their participants. Encouragingly, in most of the quantitative studies, data collection methods were generally moderate to strong, with 19 of the 22 using a previously tested or validated measure. Among those six studies that received a strong total score, two qualitative studies had very small numbers of participants (Marsh, 2012; Millar & Warwick, 2019), and one qualitative study by Ellis et. al (2013) and one mixed-methods study by Sarkadi et al. (2018) had no control group. That leaves two methodologically strong studies, including one RCT (Kalanthari et al., 2012) and one case-control study (Rousseau et al., 2007).

Overall, we found few high-quality evaluation research papers. A large proportion of existing studies are conceptual and descriptive, with a limited focus on specific migrant issues, populations, or settings (Barrie & Mendes, 2011; Botfield et al., 2016; Connor et al.,

2014; Demazure et al., 2018; Ehntholt & Yule, 2006; Nocon et al., 2017; Streitwieser et al., 2018; Sullivan & Simonson, 2016; Tyrer & Fazel, 2014; Vossoughi et al., 2018). Also, the studies reviewed did not explicitly report any collaborative co-designed activities with communities, institutions and services including young migrants and refugees that are affected by the programmes offered (Graham, Kothari, & McCutcheon, 2018). We do acknowledge that consultation of young migrants severely affected by war and trauma may not be practical. At the same time, for those young migrants and refugees that are removed from immediate dangers and stress, and have settled in a place of safety such as the host country, stakeholder consultation may propose a feasible strategy to implement the voices of those affected by the research.

Even though limited conclusions can be drawn on what is most effective for young migrants, the findings offer an opportunity for researchers to improve the quality of migrant wellbeing intervention evaluations by applying stronger designs including mixed methods. Ideally, the integration of migrants and refugees should be a collaborative process of participatory and community development approaches, ‘engaging local communities, institutions and refugees alike in the design, implementation and evaluation of integration policies and programmes’ (United Nations High Commissioner for Refugees, 2009). In other words, when designing a research project, researchers and knowledge users should work in collaboration to achieve outcomes that benefit the study population and possibly society at large. All parties involved should be viewed as experts who bring knowledge and skills of equal value to the team (Graham et al., 2018).

Indeed, the findings, from the studies reviewed, highlight the sensitive nature of humanitarian research and raises questions about ethical and moral considerations that need to be addressed during the design of any research study (Street & Luoma, 2002).

Additionally, the findings indicate an important gap in the wellbeing interventions for young people with migrant and refugee backgrounds, and especially those young people that migrate for reasons related to family reunion, work, study, or lifestyle. Also, we suggest considering the practical aspects of 'Integrated Knowledge Translation', as discussed by Graham et al. (2018), in future intervention designs for young migrants. Our findings call for further and more high-quality evidence-based research, with better (longitudinal) designs on wellbeing promotion approaches for young migrants and refugees that, ideally, include stakeholder collaboration. As we write this review the world is grappling with the coronavirus pandemic, and the ramifications are manyfold for migrants and refugees. While the full scale of the virus and its impacts are still unknown, we have already witnessed strict restrictions on the movement of people across borders and an increase in racism and discrimination for groups who are seen as carriers of the virus. This pandemic adds a further layer of complexity to the wellbeing of young migrants and refugees and makes this review and its outline for future research highly relevant.

Strengths and limitations

One of the strengths of this review is inter-rater reliability in the study quality appraisal, which was fully conducted by two independent raters. One limitation of this review is the heterogeneity of the studies in terms of sample sizes, intervention types, settings and recruitment strategies, which did not allow meta-analysis to be conducted.

Conclusion

The review sought to provide examples of existing evaluated interventions which help young people of migrant and refugee backgrounds in their integration and acculturation experience. The included interventions applied different approaches, from mental health services to expressive arts or sports programmes, empowerment programmes, and

psychological therapies offered individually, in groups, or as part of a larger service or programme. These initiatives were either conducted in school settings, the community or refugee camps. These programmes and interventions were designed to affect young migrants' emotional and psychological health and wellbeing and they have shown good results at least on a short-term basis. However, it has become evident that there is a gap in the literature on the long-term effectiveness assessments of interventions for young migrants. Also, the methodological quality of many studies is less than high and this needs to be addressed in future research project design. Given the highly sensitive nature of humanitarian research and its cross-cultural context, we believe a logical consequence is to give stakeholders and young people a voice and agency in the design of young migrant wellbeing interventions. Only in this way can we ensure the applicability and usefulness of the results to those whom the research is concerned with.

References

Al-Rousan, T., Fredricks, K., Chaudhury, S., Albezreh, S., Alhokair, A., & Nelson, B. D. (2018). Improving peace and well-being among Syrian refugee youth through a higher education initiative in Jordan. *Medicine, Conflict and Survival, 34*(3), 185-200. doi:10.1080/13623699.2018.1518748

Annan, J., Sim, A., Puffer, E. S., Salhi, C., & Betancourt, T. S. (2017). Improving mental health outcomes of Burmese migrant and displaced children in Thailand: A community-based randomized controlled trial of a parenting and family skills intervention. *Prevention Science, 18*(7), 793-803. doi:10.1007/s11121-016-0728-2

Baker, F., & Jones, C. (2006). The effect of music therapy services on classroom behaviours of newly arrived refugee students in Australia—a pilot study. *Emotional and Behavioural Difficulties, 11*(4), 249-260. doi:10.1080/13632750601022170

Barrett, P. M., Moore, A. F., & Sonderegger, R. (2000). The FRIENDS program for young former-Yugoslavian refugees in Australia: A pilot study. *Behaviour Change, 17*(3), 124-133. doi:10.1375/bech.17.3.124

Barrett, P. M., Sonderegger, R., & Sonderegger, N. L. (2001). Evaluation of an anxiety-prevention and positive-coping program (FRIENDS) for children and adolescents of non-English-speaking background. *Behaviour Change, 18*(2), 78-91. doi:10.1375/bech.18.2.78

Barrett, P. M., Sonderegger, R., & Xenos, S. (2003). Using FRIENDS to combat anxiety and adjustment problems among young migrants to Australia: A national trial. *Clinical Child Psychology and Psychiatry, 8*(2), 241-260. doi:10.1177/1359104503008002008

Barrie, L., & Mendes, P. (2011). The experiences of unaccompanied asylum-seeking children in and leaving the out-of-home care system in the UK and Australia: A critical review of the literature. *International Social Work, 54*(4), 485-503. doi:10.1177/0020872810389318

Bates-Eamer, N. (2019). Border and Migration Controls and Migrant Precarity in the Context of Climate Change. *Social Sciences, 8*(7), 198. doi:10.3390/socsci8070198

Beehler, S., Birman, D., & Campbell, R. (2012). The effectiveness of cultural adjustment and trauma services (CATS): Generating practice-based evidence on a comprehensive, school-based mental health intervention for immigrant youth. *American Journal of Community Psychology, 50*(1-2), 155-168. doi:10.1007/s10464-011-9486-2

Blackledge, A., & Pavlenko, A. (2001). Negotiation of identities in multilingual contexts. *International Journal of Bilingualism, 5*(3), 243-257. doi:10.1177/13670069010050030101

Borsch, A. S., de Montgomery, C. J., Gauffin, K., Eide, K., Heikkilä, E., & Smith Jervelund, S. (2018). Health, Education and Employment Outcomes in Young Refugees in the Nordic Countries: A Systematic Review. *Scandinavian Journal of Public Health, 47*(7), 735-747. doi:10.1177/1403494818787099

Botfield, J. R., Newman, C. E., Lenette, C., Albury, K., & Zwi, A. B. (2018). Using digital storytelling to promote the sexual health and well-being of migrant and refugee young people: A scoping review. *Health Education Journal, 77*(7), 735-748. doi:10.1177/0017896917745568

Botfield, J. R., Newman, C. E., & Zwi, A. B. (2016). Young people from culturally diverse backgrounds and their use of services for sexual and reproductive health needs: a structured scoping review. *Sexual Health, 13*(1), 1-9. doi:10.1071/SH15090

Bridges, A. J., de Arellano, M. A., Rheingold, A. A., Danielson, C. K., & Silcott, L. (2010). Trauma exposure, mental health, and service utilization rates among immigrant and United States-born Hispanic youth: Results from the Hispanic family study. *Psychological Trauma: Theory, research, practice, and policy, 2*(1), 40-48. doi:10.1037/a0019021

Connor, A., Page Layne, L., & Ellis Hilb, L. (2014). A narrative literature review on the health of migrant farm worker children in the USA. *International Journal of Migration, Health and Social Care, 10*(1), 1-17. doi:10.1108/IJMHSC-07-2013-0019

Correa-Velez, I., Gifford, S. M., & Barnett, A. G. (2010). Longing to belong: Social inclusion and wellbeing among youth with refugee backgrounds in the first three years in Melbourne, Australia. *Social Science & Medicine, 71*(8), 1399-1408. doi:10.1016/j.socscimed.2010.07.018

Critical Appraisal Skills Programme. (2018). *CASP Qualitative Research Checklist*. Retrieved from https://casp-uk.net/wp-content/uploads/2018/01/CASP-Qualitative-Checklist-2018.pdf

d'Abreu, A., Castro-Olivo, S., & Ura, S. K. (2019). Understanding the role of acculturative stress on refugee youth mental health: A systematic review and ecological approach to assessment and intervention. *School Psychology International, 40*(2), 107-127. doi:10.1177/0143034318822688

Demazure, G., Gaultier, S., & Pinsault, N. (2018). Dealing with difference: a scoping review of psychotherapeutic interventions with unaccompanied refugee minors. *Eur Child Adolesc Psychiatry, 27*, 447-466. doi:10.1007/s00787-017-1083-y

Effective Public Health Practice Project. (2009). *Quality Assessment Tool For Quantitative Studies.* Retrieved from http://www.ephpp.ca/tools.html

Ehntholt, K. A., Smith, P. A., & Yule, W. (2005). School-based cognitive-behavioural therapy group intervention for refugee children who have experienced war-related trauma. *Clinical Child Psychology and Psychiatry, 10*(2), 235-250. doi:10.1177/1359104505051214

Ehntholt, K. A., & Yule, W. (2006). Practitioner Review: Assessment and treatment of refugee children and adolescents who have experienced war-related trauma. *Journal of Child Psychology and Psychiatry, 47*(12), 1197-1210. doi:10.1111/j.1469-7610.2006.01638.x

Ellis, B. H., Miller, A. B., Abdi, S., Barrett, C., Blood, E. A., & Betancourt, T. S. (2013). Multi-tier mental health program for refugee youth. *Journal of Consulting and Clinical Psychology, 81*(1), 129. doi:10.1037/a0029844

Fazel, M., Doll, H., & Stein, A. (2009). A school-based mental health intervention for refugee children: An exploratory study. *Clinical Child Psychology and Psychiatry, 14*(2), 297-309. doi:10.1177/1359104508100128

Garoff, F., Kangaslampi, S., & Peltonen, K. (2019). Development and implementation of a group based mental health intervention for unaccompanied minors. *Scandinavian journal of psychology, 60*(1), 7-15. doi:10.1111/sjop.12497

Graham, I. D., Kothari, A., & McCutcheon, C. (2018). Moving knowledge into action for more effective practice, programmes and policy: protocol for a research programme on integrated knowledge translation. *Implementation Science, 13*, 22. doi:10.1186/s13012-017-0700-y

Haque, Z. (2010). *What Works With Integrating New Migrants? Lessons from International Best Practice*. Retrieved from

https://www.runnymedetrust.org/uploads/publications/pdfs/WhatWorksWithIntegratingNewMigrants-2010.pdf

Hawkins, N. G., Sanson-Fisher, R. W., Shakeshaft, A., D'Este, C., & Green, L. W. (2007). The multiple baseline design for evaluating population-based research. *American Journal of Preventive Medicine, 33*(2), 162-168. doi:10.1016/j.amepre.2007.03.020

Hughes, C., & Scott, R. (2013). A career intervention for humanitarian entrant students: An example. *Australian Journal of Career Development, 22*(3), 130-138. doi:10.1177/1038416213502170

Joyce, L., & Liamputtong, P. (2017). Acculturation stress and social support for young refugees in regional areas. *Children and Youth Services Review, 77*, 18-26. doi:10.1016/j.childyouth.2017.03.016

Kalantari, M., Yule, W., Dyregrov, A., Neshatdoost, H., & Ahmadi, S. (2012). Efficacy of writing for recovery on traumatic grief symptoms of Afghani refugee bereaved adolescents: A randomized control trial. *OMEGA-Journal of death and dying, 65*(2), 139-150. doi:10.2190/OM.65.2.d

Kothari, A., & Wathen, C. N. (2017). Integrated knowledge translation: digging deeper, moving forward. *J Epidemiol Community Health, 71*(6), 619-623. doi:10.1136/jech-2016-208490

Kouider, E. B., Koglin, U., & Petermann, F. (2014). Emotional and behavioral problems in migrant children and adolescents in Europe: a systematic review. *European child & adolescent psychiatry, 23*, 373-391. doi:10.1007/s00787-013-0485-8

Lara-Cinisomo, S., Xue, Y., & Brooks-Gunn, J. (2013). Latino youth's internalising behaviours: links to immigrant status and neighbourhood characteristics. *Ethnicity & Health, 18*(3), 315-335. doi:10.1080/13557858.2012.734278

Lipič, N., Seljak, P., Grintal, B., & Bagari, M. (2018). *Holistic approach to successful integration of migrants. A Guide to Developing Competencies of Professionals and Associates in Holistic Integration of Migrants.* Retrieved from https://ib-sued.de/fileadmin/user_upload/storage_ib_redaktion/IB_Sued/Produkte-Programme/Projekte/International/Holistic-Approach-Integration/o4_vodnik_ang.pdf

Markus, A. B. (2016). *Australians Today: The Australia@2015 Scanlon Foundation Survey*. Caulfield, East VIC, Australia: ACJC Monash University.

Marsh, K. (2012). “The beat will make you be courage”: The role of a secondary school music program in supporting young refugees and newly arrived immigrants in Australia. *Research Studies in Music Education, 34*(2), 93-111. doi:10.1177/1321103X12466138

McMichael, C., Gifford, S. M., & Correa-Velez, I. (2011). Negotiating family, navigating resettlement: Family connectedness amongst resettled youth with refugee backgrounds living in Melbourne, Australia. *Journal of Youth Studies, 14*(2), 179-195. doi:10.1080/13676261.2010.506529

Meyer DeMott, M. A., Jakobsen, M., Wentzel-Larsen, T., & Heir, T. (2017). A controlled early group intervention study for unaccompanied minors: Can Expressive Arts alleviate symptoms of trauma and enhance life satisfaction? *Scandinavian journal of psychology, 58*(6), 510-518. doi:10.1111/sjop.12395

Millar, O., & Warwick, I. (2019). Music and refugees' wellbeing in contexts of protracted displacement. *Health Education Journal, 78*(1), 67-80. doi:10.1177/0017896918785991

Miller, J. (2009). Teaching refugee learners with interrupted education in science: Vocabulary, literacy and pedagogy. *International Journal of Science Education, 31*(4), 571-592. doi:10.1080/09500690701744611

Miller, K. E., Kulkarni, M., & Kushner, H. (2006). Beyond trauma-focused psychiatric epidemiology: Bridging research and practice with war-affected populations. *American journal of Orthopsychiatry, 76*(4), 409-422.

Möhlen, H., Parzer, P., Resch, F., & Brunner, R. (2005). Psychosocial support for war-traumatized child and adolescent refugees: evaluation of a short-term treatment program. *Australian & New Zealand Journal of Psychiatry, 39*(1-2), 81-87. doi:10.1080/j.1440-1614.2005.01513.x

Nakeyar, C., Esses, V., & Reid, G. J. (2018). The psychosocial needs of refugee children and youth and best practices for filling these needs: A systematic review. *Clinical Child Psychology and Psychiatry, 23*(2), 186-208. doi:10.1177/1359104517742188

Nathan, S., Kemp, L., Bunde-Birouste, A., MacKenzie, J., Evers, C., & Shwe, T. A. (2013). "We wouldn't of made friends if we didn't come to Football United": the impacts of a football program on young people's peer, prosocial and cross-cultural relationships. *BMC Public Health, 13*(1), 399. doi:10.1186/1471-2458-13-399

Nguyen, H., Rawana, J. S., & Flora, D. B. (2011). Risk and protective predictors of trajectories of depressive symptoms among adolescents from immigrant backgrounds. *Journal of Youth and Adolescence, 40*(11), 1544-1558. doi:10.1007/s10964-011-9636-8

Nocon, A., Eberle-Sejari, R., Unterhitzenberger, J., & Rosner, R. (2017). The effectiveness of psychosocial interventions in war-traumatized refugee and internally displaced minors: systematic review and meta-analysis. *European journal of psychotraumatology, 8*(sup2: Traumatized Refugees). doi:10.1080/20008198.2017.1388709

Onyut, L. P., Neuner, F., Schauer, E., Ertl, V., Odenwald, M., Schauer, M., & Elbert, T. (2005). Narrative Exposure Therapy as a treatment for child war survivors with posttraumatic stress disorder: Two case reports and a pilot study in an African refugee settlement. *BMC Psychiatry, 5*(1), 7. doi:10.1186/1471-244X-5-7

Oras, R., Ezpeleta, S. C. d., & Ahmad, A. (2004). Treatment of traumatized refugee children with eye movement desensitization and reprocessing in a psychodynamic context. *Nordic Journal of Psychiatry, 58*(3), 199-203. doi:10.1080/08039480410006232

Panter-Brick, C., Dajani, R., Eggerman, M., Hermosilla, S., Sancilio, A., & Ager, A. (2018). Insecurity, distress and mental health: experimental and randomized controlled trials of a psychosocial intervention for youth affected by the Syrian crisis. *Journal of Child Psychology and Psychiatry, 59*(5), 523-541. doi:10.1111/jcpp.12832

Paudyal, P., Patel, P., & Gilchrist, K. (2018). *Health and wellbeing of young migrants: an analysis of school survey data in South East England*. Paper presented at the 11th European Public Health Conference: Parallel Programme.

Piller, I. (2016). *Linguistic diversity and social justice: An introduction to applied sociolinguistics*. UK: Oxford University Press.

Quinlan, R., Schweitzer, R. D., Khawaja, N., & Griffin, J. (2016). Evaluation of a school-based creative arts therapy program for adolescents from refugee backgrounds. *The Arts in Psychotherapy, 47*, 72-78. doi:10.1016/j.aip.2015.09.006

Rousseau, C., Benoit, M., Gauthier, M.-F., Lacroix, L., Alain, N., Viger Rojas, M., . . . Bourassa, D. (2007). Classroom drama therapy program for immigrant and refugee adolescents: A pilot study. *Clinical Child Psychology and Psychiatry*, *12*(3), 451-465. doi:10.1177/1359104507078477

Sarkadi, A., Ådahl, K., Stenvall, E., Ssegonja, R., Batti, H., Gavra, P., . . . Salari, R. (2018). Teaching Recovery Techniques: evaluation of a group intervention for unaccompanied refugee minors with symptoms of PTSD in Sweden. *European child & adolescent psychiatry*, *27*(4), 467-479. doi:10.1007/s00787-017-1093-9

Schauer, E., Neuner, F., Elbert, T., Ertl, V., Onyut, L. P., Odenwald, M., & Schauer, M. (2004). Narrative exposure therapy in children: a case study. *Intervention*, *2*(1), 18-32. Retrieved from http://kops.uni-konstanz.de/bitstream/handle/123456789/10537/Narrative_exposure_therapy_in_children.pdf?sequence=1&isAllowed=y

Stark, L., Seff, I., Assezenew, A., Eoomkham, J., Falb, K., & Ssewamala, F. M. (2018). Effects of a social empowerment intervention on economic vulnerability for adolescent refugee girls in Ethiopia. *Journal of Adolescent Health*, *62*(1), S15-S20. doi:10.1016/j.jadohealth.2017.06.014

Street, L. L., & Luoma, J. B. (2002). Control groups in psychosocial intervention research: ethical and methodological issues. *Ethics & behavior*, *12*(1), 1-30. doi:10.1207/S15327019EB1201_1

Streitwieser, B., Loo, B., Ohorodnik, M., & Jeong, J. (2018). Access for Refugees Into Higher Education: A Review of Interventions in North America and Europe. *Journal of Studies in International Education*, *23*(4), 473-496. doi:10.1177/1028315318813201

Sullivan, A. L., & Simonson, G. R. (2016). A systematic review of school-based social-emotional interventions for refugee and war-traumatized youth. *Review of educational research, 86*(2), 503-530. doi:10.3102/0034654315609419

The Cochrane Collaboration. (2011). Cochrane Handbook for Systematic Reviews of Interventions. Retrieved from http://handbook-5-1.cochrane.org/

Tyrer, R. A., & Fazel, M. (2014). School and community-based interventions for refugee and asylum seeking children: a systematic review. *PLoS ONE, 9*(2), e89359. doi:10.1371/journal.pone.0089359

Udah, H. (2019). Searching for a place to belong in a time of Othering. *Social Sciences, 8*(11), 297. doi:10.3390/socsci8110297

Udah, H., Singh, P., & Chamberlain, S. (2019). Settlement and employment outcomes of black African immigrants in Southeast Queensland, Australia. *Asian and Pacific Migration Journal, 28*(1), 53–74. doi:10.1177/0117196819830247

United Nations. (2016). *Youth and Migration*. Retrieved from https://www.un.org/esa/socdev/documents/youth/fact-sheets/youth-migration.pdf

United Nations. (2019). International migrant stock 2019. Retrieved from https://www.un.org/en/development/desa/population/migration/data/estimates2/estimates19.asp

United Nations High Commissioner for Refugees. (2009). *UNHCR Agenda for the Integration of Refugees in Central Europe*. Retrieved from https://www.refworld.org/pdfid/4bfe72542.pdf

United Nations High Commissioner for Refugees. (2010). *Convention and Protocol Relationg to the Status of Refugees.* Retrieved from

https://cms.emergency.unhcr.org/documents/11982/55726/Convention+relating+to+the+Status+of+Refugees+%28signed+28+July+1951%2C+entered+into+force+22+April+1954%29+189+UNTS+150+and+Protocol+relating+to+the+Status+of+Refugees+%28signed+31+January+1967%2C+entered+into+force+4+October+167%29+606+UNTS+267/0bf3248a-cfa8-4a60-864d-65cdfece1d47

Ustymenko, K. (2020). *The Rise in Unaccompanied Minors: A Global, Humanitarian Crisis*. Retrieved from https://cmsny.org/the-rise-in-unaccompanied-minors-a-global-humanitarian-crisis/

Van der Gucht, K., Glas, J., De Haene, L., Kuppens, P., & Raes, F. (2019). A Mindfulness-Based Intervention for Unaccompanied Refugee Minors: A Pilot Study with Mixed Methods Evaluation. *Journal of Child and Family Studies, 28*(4), 1084-1093. doi:10.1007/s10826-019-01336-5

Van Os, E. C. C., Zijlstra, A. E., Knorth, E. J., Post, W. J., & Kalverboer, M. E. (2018). Finding keys: A systematic review of barriers and facilitators for refugee children's disclosure of their life stories. *Trauma, Violence, & Abuse, 21*(2), 242-260. doi:10.1177/1524838018757748

Vossoughi, N., Jackson, Y., Gusler, S., & Stone, K. (2018). Mental health outcomes for youth living in refugee camps: A review. *Trauma, Violence, & Abuse, 19*(5), 528-542. doi:10.1177/1524838016673602

Wong, F. K. D., Chang, Y. L., & He, X. S. (2009). Correlates of psychological wellbeing of children of migrant workers in Shanghai, China. *Social Psychiatry and Psychiatric Epidemiology, 44*(10), 815-824. doi:10.1007/s00127-009-0003-y

World Health Organisation. (2014). Mental health: a state of well-being. Retrieved from https://www.who.int/features/factfiles/mental_health/en/

Yankey, T., & Biswas, U. N. (2012). Life skills training as an effective intervention strategy to reduce stress among Tibetan refugee adolescents. *Journal of Refugee Studies, 25*(4), 514-536. doi:10.1093/jrs/fer056

Ziaian, T., de Anstiss, H., Puvimanasinghe, T., & Miller, E. (2018). Refugee students' psychological wellbeing and experiences in the Australian education system: A mixed-methods investigation. *Australian psychologist, 53*(4), 345-354. doi:10.1111/ap.12301

Table 1 Characteristics of included studies

1st author Year *Country	**Study focus and population**	**Source country Host country**	**Setting Intervention Duration**	**Duration of displacement or time in host country Recruitment**	**Study design**	***n* Age range in years**	**Data collection Instrument used**	**Outcomes**	**Co-design**	**Study quality**
Al-Rousan 2018 USA	Evaluate the effects of a tuition and stipend support programme on the sense of peace and wellbeing in refugee youth located in the Jordanian Al-Zaatari refugee camp	Syria Jordan	Refugee camp Full university tuition and monthly living stipend of US$ 300 Duration of intervention unclear	4 years All students residing at the camp, available for participation at particular dates <u>Treatment</u> - Enrolled at Al-Zarqa University (located 50 km away from Al-Zaatari refugee camp) <u>Control</u> - In the process of studying for the Jordanian end of high school exam (located in refugee camp)	Case control study (non-randomly assigned) Mixed methods	*n* = 98 <u>Treatment</u> *n* = 33 67/33% F/M Age mean 17.3 – 20.2	Pre/post, survey, focus group Peace Scale	Compared to the high school students in the control group, participants in the scholarship programme reported measurable positive effects on feelings of peace, security and wellbeing, improvements in academic access, financial resources and the psychosocial health of their family and community	No	EPHPP Moderate CASP Strong
Annan 2017 USA	Examine programme effectiveness on mental health outcomes in migrant and displaced children and their parents/ primary care givers	Burma Thailand	Schools, community halls 'Happy Families Programme', to promote positive family skills and interaction 12 sessions 12 weeks	Unknown Self-selected after receiving information about the project and passed eligibility screening	RCT Mixed methods	*n* = 479 <u>Treatment</u> *n* = 240 children 51/49% F/M *n* = 240 families *n* = 256 caregivers Age 7-15	Baseline, post (4 weeks), follow up (6 months), survey and cognitive interviewing Achenbach Child Behaviour Checklist (CBCL); Youth Self Report (YSR);	At 4 weeks, children in the treatment group showed significant reductions in externalising and child attention problems, significant increase in protective psychosocial factors, and no significant effect on children's internalising problems At 6-months follow up (no control group), maintained improvement of point estimates compared to baseline on attention and	No	EPHPP Moderate CASP Strong

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							Child Psychosocial Protective Factors Scale	externalising problems (caregiver-reported) as well as externalising problems and protective factors (child-reported); female children reported significantly more internalising problems than male children (caregiver-reported)		
Baker 2006 AU	Assess intervention effectiveness on classroom behaviours in refugee students	Sudan, Iran, Liberia, Rwanda, Ethiopia, Congo Australia	School Music Therapy Two 5-week blocks of intervention with sessions 2 per week, each 30-40 min, and two 5-week blocks with no music therapy treatment for both groups 10 weeks	12-24 weeks Selected on refugee status and expected to remain enrolled in the school for at least another two school terms	Cohort study Quantitative All students received two 5-week blocks of music therapy and two 5-week blocks with no music therapy treatment	*n* = 31 <u>Group 1</u> *n* = 15 66/34% F/M <u>Group 2</u> *n* = 16 62/38% F/M Age mean 13.08 – 14.06	Pre/post each 5-week block (4 x), survey Behaviour Assessment System for Children (BASC)	Significant changes were observed over time for externalising behaviour, with particular reference to hyperactivity and aggression. No changes were observed in internalising behaviour, school problems and adaptive behaviour	No	EPHPP Moderate
Barrett 2000 AU	Assess programme effectiveness on stress levels in female teenage refugees attending a transitional school for NESB (non-English speaking background) children	Former Yugoslavia Australia	School The 'FRIENDS Programme' (pilot study) to reduce anxiety symptoms A 10-week (1h), CBT group-based anxiety intervention	2-3 months Students who appeared worried, sad, or stressed in class were referred by teachers to participate in the programme. Students were recruited for internalising difficulties, not	Case control study Quantitative	*n* = 20 <u>Treatment</u> *n* = 9 Age 14-19	Pre/post, surveys, checklists Youth Self Report Form (YSR); Spence Children's Anxiety Scale (SCAS); Ambiguous Situations Protocol;	Significant increase in anxiety symptoms from pre-treatment to post-treatment for the waiting list group. The treatment group reported a significant decrease in anxiety symptoms and a decrease in internalising symptoms. Social validity data – highly satisfied participants	No	EPHPP Moderate

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				externalising or behaviour problems			Social Validity Scale			
Barrett 2001 AU	Evaluate programme efficacy in reducing anxiety and building emotional resilience in children and adolescent refugees attending English as a second language (ESL) classes	Former Yugoslavia, China, Southeast Asia, Pacific Islands, Europe, Africa, Middle East Australia	School The 'FRIENDS Programme' (1st evaluation) to minimise internalising symptoms and improve coping ability 10 structured 1h sessions 10 weeks	2.5 months – 7.5 years From ESL classes in 4 primary and 2 high schools	Case control study Quantitative	*n* = 204 <u>Treatment</u> *n* = 121 48/52% F/M Age 7-19	Pre/post, surveys, checklists Self-esteem Inventory (SEI); Rosenberg Self-esteem scale; Revised Children's Manifest Anxiety Scale (RCMAS); Trauma Symptoms Checklist for Children (TSCL); Coping Scale for children and youth (CSCY); Hopelessness scales (KHS, BHS); Social validity scale	Treatment group participants: Improved levels of self-esteem, anxiety, and future outlook; decreased levels of severity in internalising symptoms Waitlist participants: decreased self-esteem and increased sense of hopelessness (particularly in high school students) Social validity data – overall, highly satisfied participants	No	EPHPP Weak
Barrett 2003 AU	Evaluate programme efficacy in reducing anxiety and building emotional resiliency in children and adolescent	Former Yugoslavia, other Europe, ML China, Hong Kong, Taiwan, Africa, Russia, Mexico, SE	School The 'FRIENDS Programme' (2nd evaluation); determine whether any change in psychological symptoms and	Unknown From primary and high schools located in the metropolitan hubs of Queensland and Victoria	Case control study Quantitative	*n* = 320 <u>Treatment</u> *n* = 166 48/52% F/M Age 6-19	Pre/post, follow up 6 months, surveys, checklists See Barrett 2001 for	Participants in the intervention group exhibited significantly greater self-esteem, fewer internalising symptoms, and a less pessimistic future-outlook than wait-list participants at post- and 6-months follow-up	No	EPHPP Weak

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	refugees attending ESL classes	Asia, and Pacific Islands Australia	emotional resilience would be maintained over time 10 structured 1h sessions 10 weeks				instruments used			
Beehler 2012 USA	Assess service efficacy on client functioning and PTSD symptoms in traumatised, 1st and 2nd generation children and adolescents with an immigrant background	USA, Mexico, Central America/ Caribbean, South America, Africa, Asia, Central/Eastern Europe USA	School CATS (Cultural Adjustment and Trauma Services), a school-based MH service (relationship-building; outreach services; comprehensive clinical and case management services; CBT, relaxation techniques, supportive therapy, and psychoeducation) Funding period of 3 years	1st and 2nd generation Students who received clinical services from CATS staff during the SAMHSA funding period	Cohort study Quantitative	*n* = 149 63/37% F/M TF-CBT implemented with a subset of 50 students Age mean 14.4	Pre/post, service data, clinical data NCTSN General Trauma Information Form; Child and Adolescent Functional Assessment Scale (CAFAS); Part III of the adolescent version of the UCLA PTSD Reaction Index (PTSD-RI)	Greater quantities of CBT and supportive therapy increased functioning; greater quantities of coordinating services decreased symptoms of PTSD; TF-CBT services were associated with both improved functioning and PTSD symptoms	No	EPHPP Weak
Ehntholt 2005 UK	Evaluate intervention effectiveness on the mood and behaviour of refugee and asylum-seeker children from war-	Albania, Sierra Leone, Turkey, Afghanistan, Somalia UK	School Trauma intervention 6 sessions of group CBT 6 weeks	2 years Children were chosen by Ethnic Minority Achievement Group (EMAG) teachers	Case control study (non-randomly assigned) Quantitative	*n* = 26 <u>Treatment</u> *n* = 15 34/66% F/M Age	Pre/post, semi-structured interviews; questionnaires Adapted version of the War Trauma	Intervention group: Significant decrease in overall PTSD symptom severity and intrusive PTSD symptoms; significant improvements in students' overall behaviour and emotional symptoms; post-treatment improvements	No	EPHPP Weak

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	affected countries who had experienced traumatic events			The average length of time in the UK was approx. 2 years for both groups – MH check if this is a repeat of "2 years" entered above. Or should be moved to before entry about recruitment		mean 12.47 – 13.46	questionnaire; Revised Impact of Event Scale; DSRS and the revised Children's Manifest Anxiety Scale; Behavioural screening measure (SDQ)	were not maintained at 2-months follow-up; control group: no improvements		
Ellis 2013 USA	Assess longitudinal project outcomes on the mental health of refugee youth in middle schools	Somalia USA	School SHIFA Project, a multi-tiered programme; providing broad-based prevention and community resilience building to the community and parents; more targeted, school-based prevention and stress-reduction interventions to an identified at-risk group; and intensive intervention for those with significant psychological distress Tier 1 (engage population to identify those in need); Tier 2 (skills-based groups to	1-9 years (mean = 5) 5 years on average Referred by their teachers, parents, and group leaders, typically if they demonstrated emotional and/or behavioural dysregulation	Cohort study Quantitative	*n* = 30 37/63% F/M Age 11-15	School records, questionnaires (baseline, 6, 12 months) War Trauma Screening Scale; Adolescent Post-War Adversities Scale-Somali version; UCLA PTSD Reaction Index for DSM–IV (Diagnostic and Statistical Manual of Mental Disorders, Fourth edition); Depression Self-Rating Scale	Overall improvements in mental health and resources across all tiers; children with higher mental health needs were appropriately matched with higher intensity services; significant improvements in symptoms of depression and posttraumatic stress disorder in top tier participants, correlated with the stabilisation of resource hardships	No	EPHPP Strong

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			manage stress) – all students; Tier 3 – (individual Trauma Systems Therapy - TST) – 50% of students; Tier 4 – (home-based TST) – 13% of students 1 school year							
Fazel 2009 UK	Assess service effectiveness on emotions and behaviour in refugee and asylum-seeking children from countries with ongoing conflict	Balkans, Asia India, Africa UK	School Mental health service to improve accessibility for at-risk refugee children Weekly consultations at 3 schools Service components: family work (with or without the child); individual therapy (psychodynamic, supportive); or group work (for the children/ adolescents or parents) with additional in-home and crisis intervention work. If hospital-based services were needed, the school service facilitated the contact	Within the past 5 years Referral by their teacher Control Group 1 Non-refugee ethnic minority group Control Group 2 Indigenous white group	Case control study (non-randomly assigned) Quantitative	*n* = 141 Treatment *n* = 47 32/68% F/M All groups received the intervention Age 5-18 (57% aged 10-18)	Self-report questionnaire (volunteer-based) (baseline, 9 months) Strengths and Difficulties Questionnaire (SDQ)	Improved hyperactivity score in all (n=47) refugee children; improved scores in peer problems in refugee children who were directly seen and treated by the service (n=11)	No	EPHPP Weak

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			All children were discussed with link teachers and advice given; Eleven (n=11) of the refugee children who displayed a wide range of emotional and behavioural problems were seen and treated directly by the service 1 school year							
Hughes 2013 AU	Assess intervention usefulness in career education for refugee or humanitarian entrants at a Catholic education college	Sudan, Eritrea, Nepal Australia	School Career intervention 50 lessons of 50min, plus additional time for follow-up work with those who were successful in gaining casual employment 10 weeks	3-7 years Those students that were not likely to go to university	Cohort study Mixed methods	*n* = 7 Age 15-19	Self-report written student feedback, questionnaire Vocational Identity Scale and Certainty Scale	Improved understanding of how to get a job in Australia and job interview skills; knowledge of resource persons to assist with career concerns, the multiple transitions between life, learning and work roles, opportunities in local organisations, and employer expectations, work health and safety understandings developed among the casually employed participants; despite a trend towards, the career intervention did not significantly influence vocational identity or career choice certainty	No	EPHPP Weak CASP Moderate
Garoff 2019 FIN	To assess the effectiveness of the intervention on unaccompanied	Afghanistan, Iraq Finland	Accommodation units for UMs	2 months – 3.5 years	Cohort study	*n* = 18 11/89% F/M 9-17 years	Pre/post questionnaires; ethnographic	No evidence of effectiveness on UMs' mental health	No	EPHPP Weak CASP

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	minors' (UMs) mental health (refugees and asylum-seekers)		Mental health intervention Group-based, focused on stabilising and preventing mental health problems Four groups of 2-8 participants 10 weekly, 90min sessions Session structure - (1) getting together, including snacks and drinks; (2) a body-oriented relaxation and stabilisation exercise; (3) an exercise and discussion about the topic of the session; (4) closing with a relaxation exercise; and (5) final words or showing how you feel with picture cards. Topics: Group formation; psychoeducation; wellbeing; topics identified by participants (e.g. sleep, pain, intimate relationships,	All UMs living at the units were offered a chance to participate	Mixed methods		interviews (Children) Focus group discussion, interview (staff); Focus Group Discussions (FGD) Children's Impact of Event Scale (CRIES); Child and Youth Resilience Measure (CYRM) Strengths and Difficulties Questionnaire (SDQ)	Engagement with the immediate social environment and taking part in daily activities is associated with improved wellbeing		Moderate

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			emotions, anger); coping resources; Tree of the Future exercise; informal closing party 14 months							
Kalantari 2012 IR	Evaluate intervention efficacy on traumatic grief symptoms in war-bereaved adolescent refugees	Afghanistan Iran	School 'Writing for Recovery' group intervention; two 15min sessions each day (am girls; pm boys), provided over 2 consecutive days 3 days	Unclear Students with the highest scores on the Traumatic Grief Inventory for Children (TGIC)	RCT Quantitative	*n* = 61 <u>Treatment</u> *n* = 29 45/55 F/M Age 12-18	Self-reported questionnaire (1 week follow up) Farsi version of Traumatic Grief Inventory for Children (TGIC)	Short-term outcomes - significant decrease in the total score of TGIC symptoms in the treatment group, and slightly increased total scores in the control group	No	EPHPP Strong
Marsh 2012 AU	Assess longer-term programme effects on newly arrived immigrants' and refugees' acculturation and integration within the host culture	Sierra Leone, Ghana, Croatia, Vietnam, Pakistan Australia	School Extracurricular 'School programme'; music and dance groups, involving choral and instrumental activities and a variety of dance forms in creative development, rehearsal, and performance situations; teacher and peer tutoring; learning of familiar and meaningful songs; 1 per week	Newly arrived - 1 year Self-elected or invitations	Cohort study Qualitative	*n* = 8 Age 14-18	Videos, field notes, interviews, focus groups	Increased feeling of belonging (to communities of practice within the school and to the wider Australian community, as well as to a global music community)	No	CASP Strong

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			7 months							
Meyer 2017 NO	Assess the effectiveness of the intervention on unaccompanied minors' symptoms of trauma and its potential to enhance life satisfaction and hope	Afghanistan, Somalia, Iran, Algeria Norway	Arrival Centre EXIT - Expressive Arts in Transition Two 1.5h sessions/week for 5 weeks Manualised group intervention based on group principles of safety, stabilisation, anxiety and stress management, building emotion regulation skills and trauma education 10-15min breathing exercises followed by educational part with focus on connection and engagement; calming; efficacy, identity, hope; self-efficacy; connectedness <u>Control group</u> LAU Life as Usual programme: information programme, schooling, dance and sport activities	> 3 weeks	Cohort analytic study	*n* = 103 M <u>Treatment</u> N = 70 <u>Control</u> N = 73 15-18 years	Questionnaires (in native language), baseline (T1), at the end of the 6-week intervention programme (T2), and at 5 months (T3), 15 months (T4) and 25 months (T5) Serious Life Events checklist (SLE) Diagnostic and Statistical Manual of Mental Disorders, Fourth edition (DSM-IV) Hopkins Symptom Checklist-25 (HSCL-25) Harvard Trauma Questionnaire (HTQ) Cantril's Ladder of Life	Significant higher scores long-term in life satisfaction and hope for the future in the treatment group	No	EPHPP Moderate

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			5 weeks				Satisfaction measures (CLS)			
Millar 2019 UK	Assess the effectiveness of music practice on the wellbeing of young refugees	Iraq (Yazidi) Greece	Refugee camp Guitar lessons and singing, participant performances and group discussions 5 weeks	Unknown By invitation	Cohort study Qualitative	*n* = 6 50/50% F/M Age 11-18	Semi-structured interviews, participant observation, field notes	Increased sense of wellbeing and emotional expression; improved social relations, self-knowledge, positive self-identification and a sense of agency	No	CASP Strong
Möhlen 2005 DE	Assess programme effectiveness on child and adolescent refugees' emotional distress and psychosocial functioning	Albania (Kosovo) Germany	Refugee accommodation Short-term psycho-social support programme; a combination of individual, family, and group sessions; a trauma- and grief-focusing therapy; verbalising; relaxation techniques; the use of creative techniques such as painting, playing, acting, and fantasy journeys (guided imagery); group discussions, and psychoeducation about trauma and trauma reactions (focused on parents) 12 weeks	12.2 months – 12.2 months? Not 12.5? Unclear	Cohort study Quantitative	*n* = 10 34/66% F/M Age 10-16	Pre/post, structured clinical interviews Schedule for Affective Disorders and Schizophrenia for School-Age Children – Present and Lifetime Version (K-SADS-PL); Harvard Trauma Questionnaire (HTQ); Diagnostic System for Psychological Disorders (DISYPS-KJ); German version of the Children's Global	Increased psychosocial functioning in 9/10 participants; significantly reduced posttraumatic, anxiety and depressive symptoms; reduced PTSD diagnoses from 60% to 30%; no change in the number of patients with PTSD and a high rate of comorbid symptoms (depression and anxiety) as well as a history of severe traumatisation	No	EPHPP Moderate

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							Assessment Scale (CGAS)			
Nathan 2013 AU	Assess programme impact on health and wellbeing in students that arrived in Australia as refugees and humanitarian entrants, enrolled in four Football United Schools	Afghanistan, Burma, Iran, Iraq, Sierra Leone, Africa, Asia Australia	Schools A 'Football programme' to promote individual health and wellbeing, connectedness and cross-cultural engagement Football activities, capacity building, building linkages between participants and partner agencies, raising awareness through advocacy, key partnerships and high-profile champions Duration unclear	Within 1-2 years, and longer <u>Treatment Group</u> A sub-sample of the IEC student population <u>Control Group</u> The whole IEC student population	Case control study (non-randomly assigned) Mixed methods	*n* = 142 <u>Treatment</u> *n* = 63 4.8/95.2% F/M Age mean 14.4 - 15.0	Time points of data collection unclear Survey, interviews	Higher levels of other-group orientation, lower scores on peer problems, and significantly higher scores on pro-social behaviour in participants of the treatment groups	No	EPHPP Weak CASP Strong
Onyut 2005 UG & DE KIDNET see Schauer	Assess therapy efficacy on the mental health of refugee children suffering from depression and PTSD	Somalia Uganda	Refugee settlement 'KIDNET', a child-friendly Narrative Exposure Therapy; four to six 1-2h one-to-one sessions; create a lifeline chart, pictures and a narrative, including hopes and aspirations	Unclear Participants identified from a larger epidemiological survey	Cohort study Quantitative	*n* = 6 50/50% F/M Age 12-17	Pre/post, 9-months follow-up, clinical interviews Posttraumatic Diagnostic Scale (PDS); Hopkins Symptom	Mean CIDI scores dropped from 14.3 to 9.0 (1 month) to 6.2 (9 months); at 9 months follow-up: 4/6 participants had no more PTSD, 2 had borderline scores; at 1 & 9 months follow-up: 4 participants with major depression at the beginning of treatment scored lower than clinically significant	No	EPHPP Weak

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			Duration unclear				Checklist-25 (HSCL); Composite International Diagnostic Interview (CIDI)			
Oras 2004 SE	Assess therapy efficacy on posttraumatic stress symptoms among refugee children	Asia, Turkey, Europe, Africa Sweden	Psychiatric Hospital Unit A trauma focusing therapy; 'Eye movement desensitisation and reprocessing' (EMDR) combined with conversational therapy for adolescents and play therapy for children younger than 13 years; Psychotherapy: between 5-25 sessions, 1-2 per week EMDR: between 1-6 sessions per person Duration varied according to need	Unclear Those, seen at an outpatient MH service between 1996-1999	Cohort study Quantitative	*n* = 13 77/33% F/M Age 8-16	Pre/post, semi-structured interviews Posttraumatic stress symptom scale for children (PTSS-C); Global assessment of functioning scale (GAF)	Increased level of functioning correlated with reduced PTSD-non-related and depression symptoms, but not with PTSD-related symptoms	No	EPHPP Weak
Panter-Brick 2018 USA	Assess long-term programme effectiveness on socio-emotional development and mental health in adolescents	Syria, Jordan Jordan	Youth Centres The 'Advancing Adolescents programme'; 16 sessions (2 per week); Fitness	Unclear Enrolled in the Mercy Corps Advancing adolescent programme	RCT Quantitative	*n* = 817 <u>Treatment</u> *n* = 463 43/56% F/M	Questionnaires (Baseline, 10 weeks & 11 months) Human Insecurity (HI)	Medium to small effect sizes for all psychosocial outcomes - Human insecurity, distress, perceived stress, two secondary mental health outcomes on the AYMH and SDQ scales; no programme	No	EPHPP Moderate

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	affected by humanitarian crises		activities; arts & crafts; vocational, technical, and language skills; First aid; designing of community development project plans to build social capital 8 weeks			Age mean 14.73	scale; Human Distress (HD) scale; Arab Youth Mental Health (AYMH) scale; Strengths and Difficulties Questionnaire (SDQ); Child Revised Impact of Events Scale (CRIES-8); Traumatic Events Checklist	impacts for prosocial behaviour or posttraumatic stress reactions; beneficial impacts were stronger for youth with exposure to four trauma events or more; sustained effects of the intervention on Human Insecurity for both groups		
Quinlan 2016 AU	Assess therapy impact on emotions and behaviour in newly arrived adolescents with refugee backgrounds	Middle East, East Asia, Africa Australia	School 'Home of Expressive Arts and Learning (HEAL)'; arts and music therapy activities; the Tree of Life programme and the BRiTA Futures programme addressing self- and cultural identity 1h per week Plus, needs-based individual therapy45min/week 10 weeks	Newly arrived Identified by teachers and community caseworkers	Controlled Trial (non-randomly assigned) Quantitative	*n* = 42 <u>Treatment</u> *n* = 22 64/38% F/M Age mean 15.0 - 15.42	Pre/post, questionnaires Hopkins Symptom Checklist (HSCL); Strengths and Difficulties Questionnaire (SDQ-T)	Moderate effect size for the reduction of behavioural difficulties, emotional symptoms, hyperactivity, and peer problems	No	EPHPP Moderate

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Rousseau 2007 CAN	Assess programme effectiveness on emotional and behavioural problems and school performance in immigrant and refugee adolescents enrolled at a multi-ethnic school	Asia, Eastern Europe, South America, Middle East, Africa Canada	School Drama therapy programme 1 x 75min sessions per week; improvised acting out of stories told or written down, accompanied by music; switching between French and native language, peers help with translation 9 weeks	< 1 year All students attending integration classes and consented to participation	Case control study Quantitative	*n* = 123 <u>Treatment</u> *n* = 66 40/60% F/M Age 12-18	Pre/post, questionnaires, report cards Strengths and Difficulties Questionnaire (SDQ); Self-esteem Scale (SES)	No reported (by students and teachers) improvement in self-esteem or emotional and behavioural symptoms Lower mean levels of perceived impairment in the intervention group (friendships, home-life and leisure activities); significantly increased performance in mathematics Improved oral French expression in both groups	No	EPHPP Strong
Sarkadi 2018 SW	Assess Programme effectiveness on symptoms of PTSD and depression in unaccompanied refugee minors	Middle East, Afghanistan, Syria Sweden	Community setting TRT Teaching Recovery Techniques Manualised group intervention based on TF-CBT Sessions are between 90-120min; 5 x for young people; 2 x for parents/caregivers Young people: psychoeducation; technique to regulate arousal; EMDR; dreamwork and distraction;	Unknown Children registered with a Red Cross Treatment Centre for Trauma	Cohort study Quantitative	*n* = 46 7/93% F/M Age 14-18	Pre/post questionnaires, interviews Children's Revised Impact of Event Scale (CRIES-8) Montgomery–Åsberg Depression Rating Scale Self-report (MADRS-S)	Significant decreases in PTSD and depression symptoms	No	EPHPP Strong CASP Strong

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			relaxation, breath control, and coping self-statements; "fear thermometer" Activity scheduling; sleep hygiene; trauma discussions; addressing fear; exposure to traumatic memories by drawing, writing and talking and earlier learnt self-regulating techniques; and looking to the future discussions Parents/caregivers: psychoeducation about trauma and how to cope with ongoing traumas 6 weeks							
Schauer 2004 UG & IT KIDNET see Onyut	Evaluate therapy effectiveness on the mental health and wellbeing of one refugee boy	Somalia Uganda	Refugee camp KIDNET, a Narrative Exposure Therapy to reduce symptoms of PTSD and better process events and their consequences; four sessions of 60-90min each 3 weeks	3 years 1 child of many identified with PTSD	Case study Quantitative	*n* = 1 100% M Age 13	Pre/post (6 months), questionnaire Posttraumatic Stress Diagnostic Scale (PDS)	Symptoms were reduced to a level below PTSD (to 1/3 of the original score); zero avoidance symptoms; almost zero intrusive symptoms; hyperarousal symptoms present at times but did no longer interfere with his life functioning	No	EPHPP Weak

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Stark 2018 USA	Assess programme effectiveness on economic vulnerability in adolescent refugee girls	Sudan, South Sudan, neighbouring countries Ethiopia	Refugee camps COMPASS, a social empowerment programme to help girls build assets to prevent and respond to violence, and reduce economic vulnerability Girl participants (62 groups of 20-25: 40 fixed-curriculum, mentor-facilitated sessions, 1 per week – life and economic skills 10 months Caregivers of girls (groups of 20-25): 90-120 min discussion sessions 1 per month, (positive relationship building, empathetic communication, non-violent discipline methods, specific developmental and cultural issues experienced by adolescent girls) 8 months	Unclear Living in three camps between July and September 2015, satisfying age and verbal language proficiency requirements	Case control study (randomly assigned within groups) Quantitative	*n* = 919 100% F <u>Treatment</u> *n* = 457 Age 13-19	Pre/post (1 month), surveys	No difference found between both groups in any of the domains; The intervention did not seem to keep girls in school, nor influence girls not in school to return to their education, work for pay, work for pay while not enrolled in school, or engage in transactional sexual exploitation	No	EPHPP Moderate
Van Der Gucht	Assess the effectiveness of the	Afghanistan, Albania, Syria,	Refugee shelters	Unknown	Cohort study	N = 13 38/62 F/M	Pre/post questionnaires;	Medium effects on the reduction of negative affect	No	EPHPP Strong

1st author Year *Country	**Study focus and population**	**Source country Host country**	**Setting Intervention Duration**	**Duration of displacement or time in host country Recruitment**	**Study design**	***n* Age range in years**	**Data collection Instrument used**	**Outcomes**	**Co-design**	**Study quality**
2019 Belgium	intervention on Ums' mental health	Russia, Bosnia, Angola, Pakistan, Rwanda, Somalia Belgium	Mindfulness-based intervention Eight 90min sessions, 1 per week Short guided experiential mindfulness exercises (such as body scan, breathing space, mindful yoga, walk meditation), informal exercises (such as mindful eating and mindful listening to music), sharing of experiences of these exercises, and psychoeducation on the experience of stress and self-care 8 weeks	UMs residing at the shelters, qualify for age and state of MH (no diagnosed severe mental illness), basic knowledge of Dutch	Mixed methods	Age mean 15	semi-structured interviews International Positive and Negative Affect Schedule Short Form (I-PANAS-SF) Subscale of the Depression Anxiety Stress Scales (DASS-21-D) Children's Impact of Events Scale (CRIES)	and improvement of positive affect; large effects on the reduction of symptoms of depression Participants who completed the training made use of the mindfulness exercises as a new coping strategy in combination with other familiar coping strategies		CASP Moderate
Yankey 2012 IN	Assess intervention effectiveness on refugee adolescents' psychological, social, and mental wellbeing	Tibet, or born in exile in India, Nepal, Bhutan India	School Life Skills Training; 10 life skills: decision making, problem-solving, effective communication, interpersonal relationship, empathy, coping with emotions,	Unclear Residing at the Tibetan Children's Village (TCV) in Himachal Pradesh, India, studying in classes 7, 8, 9 and 10	Case control study (randomly assigned) Quantitative	*n* = 600 <u>Treatment</u> *n* = 150 <u>Control</u> *n* = 150 Age 13-19	Pre/post (2 weeks), questionnaires Life skills assessment scale (administered after each session to assess understanding)	Cognitive life skills (creative and critical thinking) significantly contributed to reducing stress related to school, leisure, and self; social skills (effective communication and empathy) are better predictors of school stress, future stress and leisure stress; decision-making and critical thinking were	No	EPHPP Weak

1st author Year *Country	Study focus and population	Source country Host country	Setting Intervention Duration	Duration of displacement or time in host country Recruitment	Study design	*n* Age range in years	Data collection Instrument used	Outcomes	Co-design	Study quality
			coping with stress, creative thinking, critical thinking and self-awareness; 30 basic sessions, 15 additional sessions for those that needed more help 7 months				Problem questionnaire to measure stress	significant predictors of self-stress		

*AU – Australia; CAN – Canada; DE – Germany; IN – India; IR – Iran; IT – Italy; SE – Sweden; UG – Uganda; UK – United Kingdom; USA – United States of America

Appendix A Quality appraisal of quantitative research - EPHPP tool

Publication Year Research design	**A** **Selection bias**	**B** **Study design**	**C** **Confounders**	**D** **Blinding**	**E** **Data collection methods**	**F** **Withdrawals and dropouts**	**G** **Intervention integrity**	**H** **Analyses**	**Total score**
Al-Rousan 2018 Mixed methods	Moderate	Moderate	Strong	Moderate	Strong	Weak	Q1=Less than 60% Q2=Can't tell Q3=No	Q1=Individual Q2=Individual Q3=Yes Q4=Yes	Moderate
Annan 2017 Mixed methods	Strong	Strong	Weak	Moderate	Moderate	Strong	Q1=Less than 60% Q2=Yes Q3=Can't tell	Q1=Community/individual Q2=Individual Q3=Yes Q4=Yes	Moderate
Baker 2006 Quantitative	Moderate	Moderate	Strong	Moderate	Strong	Weak	Q1=80-100% Q2=Can't tell Q3=Can't tell	Q1=Individual Q2=Individual Q3=Yes Q4=Yes	Moderate
Barrett 2000 Quantitative	Moderate	Moderate	Strong	Moderate	Moderate	Weak	Q1=Less than 60% Q2=Yes Q3=Can't tell	Q1=Individual Q2=Individual Q3=Yes Q4=Yes	Moderate
Barrett 2001 Quantitative	Weak	Moderate	Weak	Moderate	Strong	Weak	Q1=Less than 60% Q2=Yes Q3=Can't tell	Q1=Individual Q2=Individual Q3=Yes Q4=Yes	Weak
Barrett 2003 Quantitative	Moderate	Strong	Strong	Weak	Strong	Weak	Q1=Less than 60% Q2=Yes Q3=Yes	Q1=Community/individual Q2=Individual Q3=Yes Q4=Yes	Weak
Beehler 2012 Quantitative	Moderate	Moderate	Strong	Weak	Strong	Weak	Q1=Less than 60% Q2=Can't tell Q3=Yes	Q1=Individual Q2=Individual Q3=Yes Q4=Yes	Weak
Ehntholt 2005 Quantitative	Moderate	Moderate	Weak	Moderate	Weak	Weak	Q1=Less than 60% Q2=Yes Q3=Yes	Q1=Individual Q2=Individual Q3=Yes Q4=Yes	Weak
Ellis 2013 Quantitative	Strong	Moderate	Strong	Moderate	Strong	Moderate	Q1=80-100% Q2=Yes Q3=Yes	Q1=Individual Q2=Individual Q3=Yes Q4=Yes	Strong
Fazel 2009 Quantitative	Moderate	Strong	Weak	Weak	Strong	Moderate	Q1=Less than 60% Q2=Can't tell Q3=Can't tell	Q1=Individual Q2=Individual Q3=Yes Q4=Yes	Weak
Garoff 2019 Mixed methods	Weak	Moderate	Strong	Weak	Moderate	Strong	Q1=Can't tell Q2= Can't tell Q3= Can't tell	Q1=Individual Q2=Individual Q3=Yes Q4=Can't tell	Weak
Hughes 2013	Weak	Weak	Weak	N/A	Moderate	Weak	Q1=Can't tell Q2=No	Q1=Individual Q2=Individual	Weak

Mixed methods							Q3=Can't tell	Q3=Can't tell Q4=Can't tell	
Kalantari 2012 Quantitative	Moderate	Strong	Strong	Moderate	Moderate	Strong	Q1=Less than 60% Q2=Can't tell Q3=Yes	Q1=Individual Q2=Individual Q3=Yes Q4=Yes	Strong
Meyer Demott 2017 Quantitative	Moderate	Moderate	Strong	Weak	Moderate	Moderate	Q1=80-100% Q2=Can't tell Q3=No	Q1= individual Q2=individual Q3=Yes Q4=Yes	Moderate
Möhlen 2005 Quantitative	Moderate	Moderate	Strong	Weak	Strong	Strong	Q1=80-100% Q2=Can't tell Q3=Can't tell	Q1=Community/individual Q2=Individual Q3=Yes Q4=Yes	Moderate
Nathan 2013 Mixed methods	Moderate	Moderate	Weak	Weak	Strong	Weak	Q1=Can't tell Q2=Can't tell Q3=Can't tell	Q1=Community/individual Q2=Individual Q3=Yes Q4=Yes	Weak
Onyut 2005 Quantitative	Moderate	Moderate	Weak	Weak	Strong	Strong	Q1=80-100% Q2=Yes Q3=Can't tell	Q1=Individual Q2=Individual Q3=Yes Q4=Yes	Weak
Oras 2004 Quantitative	Strong	Moderate	Strong	Weak	Weak	Strong	Q1=80-100% Q2=Can't tell Q3=Yes	Q1=Individual Q2=Individual Q3=Yes Q4=Yes	Weak
Panter-Brick 2018 Quantitative	Moderate	Strong	Strong	Strong	Strong	Weak	Q1=Less than 60% Q2=Yes Q3=No	Q1=Individual Q2=Individual Q3=Yes Q4=Yes	Moderate
Quinlan 2016 Quantitative	Moderate	Strong	Strong	Weak	Strong	Strong	Q1=Less than 60% Q2=No Q3=Yes	Q1=Individual Q2=Individual Q3=Yes Q4=Yes	Moderate
Rousseau 2007 Quantitative	Moderate	Moderate	Strong	Moderate	Strong	Strong	Q1=Less than 60% Q2=No Q3=Can't tell	Q1=Individual Q2=Individual Q3=Yes Q4=Yes	Strong
Sarkadi 2018 Mixed methods	Moderate	Moderate	Strong	Moderate	Strong	Moderate	Q1=60-79% Q2=Yes Q3=Can't tell	Q1=Individual Q2=Individual Q3=Yes Q4=Yes	Strong
Schauer 2004 Quantitative	Weak	Weak	N/A	Moderate	Weak	N/A	N/A	N/A	Weak
Stark 2018 Quantitative	Moderate	Strong	Moderate	Weak	Strong	Strong	Q1=Less than 60% Q2=Can't tell Q3=Yes	Q1=Community/individual Q2=Individual Q3=Yes Q4=Yes	Moderate
Van der Gucht 2019	Moderate	Moderate	Strong	Moderate	Strong	Moderate	Q1=60-79% Q2=Can't tell Q3=Can't tell	Q1=Individual Q2=Individual Q3=Yes	Strong

Mixed methods								Q4=Yes	
Yankey 2012 Quantitative	Moderate	Moderate	Weak	Moderate	Strong	Weak	Q1=Less than 60% Q2=Can't tell Q3=Yes	Q1=Individual Q2=Individual Q3=Yes Q4=Yes	Weak
Totals	Strong=3 Moderate=16 Weak=3	Strong=7 Moderate=13 Weak=2	Strong=12 Moderate=1 Weak=8 N/A= 1	Strong=1 Moderate=11 Weak=9 N/A=1	Strong=15 Moderate=4 Weak=3	Strong=8 Moderate=2 Weak=11 N/A=1	80-100%=6 60-79%=2 Less than 60%=14 Can't tell=3 N/A=1 Consistency measured Yes=9 No=3 Can't tell=13 N/A=1 Contamination Yes=9 No=3 Can't tell=13 N/A=1		

*0 weak scores=strong 1 weak score=moderate 2+ weak scores=weak

Appendix B Quality appraisal of qualitative research - CASP tool

		1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**Total score**
Publication	Research design	Clear statement of aim of research?	Qualitative methodology appropriate?	Research design appropriate for aims?	Recruitment strategy appropriate for aims?	Data collection addresses research issue?	Relationship between researcher and participant considered?	Ethical consideration s accounted for?	Rigorous data analysis?	Clear statement of findings?	Research is valuable?	
Al-Rousan 2018	Mixed methods	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Strong
Annan 2017	Mixed methods	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Strong
Hughes 2013	Mixed methods	Yes	Yes	No	Yes	Yes	No	No	No	Yes	Can't tell	Moderate
Garoff 2019	Mixed methods	Yes	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Can't tell	Moderate
Marsh 2012	Qualitative	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Strong
Millar 2019	Qualitative	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Strong

Nathan 2013	Mixed methods	Yes	Yes	Yes	Yes	Yes	Can't tell	Yes	Yes	Yes	Yes	Strong
Sarkadi 2018	Mixed methods	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Strong
Van der Gucht 2019	Mixed methods	Yes	Yes	No	Can't tell	Yes	No	Yes	Yes	Yes	Can't tell	Moderate
Totals		Yes =9	Yes =9	Yes =5 No=4	Yes =8 Can't tell=1	Yes =8 No=1	Yes =3 No=5 Can't tell=1	Yes =7 No=2	Yes =7 No=2	Yes =8 No=1	Yes =6 Can't tell=3	

*8-10=strong 5-7=moderate 1-4=weak