Bachelor's Thesis

Degree Program in Nursing

Nursing

2016

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# MENTAL HEALTH PROBLEMS OF CHILD AND ADOLESCENT REFUGEES AND ASYLUM SEEKERS

## – A Literature Review

TURUN AMMATTIKORKEAKOULU
TURKU UNIVERSITY OF APPLIED SCIENCES

BACHELOR'S THESIS | ABSTRACT

TURKU UNIVERSITY OF APPLIED SCIENCES

Degree program in Nursing | Nursing

2016 | Total number of pages 70

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# MENTAL HEALTH PROBLEMS OF CHILD AND ADOLESCENT REFUGEES AND ASYLUM SEEKERS – A LITERATURE REVIEW

Finland received 32.500 asylum seekers in 2015. That is the 4th highest number in Europe per 100.000 inhabitants. 3000 (9%) of all the asylum seekers in Finland were Unaccompanied Minors, i.e children under 18 years of age who arrived without parents or guardians. In addition to them, this review also included children who arrived accompanied with parents or guardians. Most children have arrived to Finland from Afghanistan, Iraq and Somalia, countries with ongoing conflicts and war. Experiences of trauma are common for those living in a war zone and those escaping it. Post traumatic stress disorder is a mental health disorder that may develop after experiencing or witnessing a traumatic event.

The aim of this review was to examine what are the mental health problems of child and adolescent refugees and asylum seekers. The results were published in the Theseus database. The research questions were: 1) What are the most common mental health problems of child and adolescent refugees and asylum seekers? 2) What is the prevalence of those mental health problems? 3) What are the factors that contribute to those mental health problems?

The method chosen for this Bachelor's Thesis was literature review. The quality of the 15 primary studies chosen for this review were carefully appraised. Coding content analysis was applied in order to find categories and themes, in which the results were shown.

Based on the findings of the literature research the most common mental disorders of child and adolescent refugees are PTSD (31 % - 66 %), depression (15 % - 45 %) and anxiety (16 % - 50 %). The findings suggested that the factors that contribute to those problems are being a girl, the number and severity of traumatic events, being unaccompanied minor, frequent relocations between asylum centers in the host country, living in a large scale asylum center, age assessment, uncertain asylum seeker status, and daily stressors such as lack of money or independence or discrimination in the new country.

KEYWORDS:

Refugee, asylum seeker, child, adolescent, youth, minor, mental health, factor, prevalence

OPINNÄYTETYÖ (AMK) | TIIVISTELMÄ

TURUN AMMATTIKORKEAKOULU

Hoitotyön koulutusohjelma | Sairaanhoitaja

2016 | Sivumäärä 70

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# PAKOLAIS- JA TURVAPAIKANHAKIJALASTEN JA NUORTEN MIELENTERVEYSONGELMAT

# - KIRJALLISUUSKATSAUS

Vuonna 2015 Suomeen saapui 32.500 turvapaikanhakijaa. Luku on Euroopan 4.korkein per 100.000 asukasta. 3000 (9 %) kaikista turvapaikanhakijoista oli yksintulleita alaikäisiä, eli alle 18-vuotiaita lapsia, jotka saapuivat ilman vanhempia tai huoltajaa. Tämä opinnäytetyö huomioi myös vanhempien tai huoltajien kanssa tulleet alaikäiset turvapaikanhakijat. Suurin osa lapsista saapui Suomeen Afghanistanista, Irakista ja Somaliasta, maista joissa on sota tai konflikti. Traumaattiset kokemukset ovat yleisiä ihmisille, jotka asuvat sota-alueella ja pakenevat sieltä. Traumaperäinen stressihäiriö on mielenterveyden häiriö joka saattaa kehittyä sen jälkeen kun on nähnyt tai ollut itse osallisena traumaattisessa tapahtumassa.

Tämän katsauksen tavoite oli tutkia lapsi- ja murrosikäisen pakolaisen tai turvapaikanhakijan mielenterveyden ongelmia. Tulokset julkaistaan Theseus – tietokannassa. Tutkimuskysymykset olivat: 1) Mitkä ovat tavallisimmat lasten ja nuorten pakolaisten tai turvapaikanhakijoiden mielenterveysongelmat? 2) Mikä on niiden esiintyvyys? 3) Mitkä tekijät vaikuttavat mielenterveyden ongelmiin?

Opinnäytetyön metodiksi on valittu kirjallisuuskatsaus. Valitun 15 alkuperäisen tutkimuksen laatu arvioitiin huolellisesti. Sisällönanalyysia ja koodausta käytettiin jotta löydettiin ryhmiä ja teemoja joiden puitteissa tulokset näytettiin.

Kirjallisuuskatsauksen tuloksien mukaan tavallisimmat lapsipakolaisten mielenterveydenhäiriöt ovat traumaperäinen stressihäiriö PTSD (31 % -66 %), masennus (15 % -45 %) ja ahdistus (16 % -50 %). Tuloksien mukaan mielenterveyden ongelmiin vaikuttavia tekijöitä ovat tyttösukupuoli, traumaattisten tapahtumien lukumäärä ja vakavuus, maahantulo yksin ilman vanhempia tai huoltajaa, useat uudelleensijoittelut vastaanottokeskusten välillä, asuminen isossa vastaanottokeskuksessa, iänmääritys ja epävarma turvapaikkastatus, ja päivittäiset stressitekijät kuten rahanpuute tai syrjintä uudessa maassa.

ASIASANAT:

Pakolainen, turvapaikanhakija, lapsi, nuori, alaikäinen, mielenterveys, syyt, esiintyvyys

*“Warm yourself by the fire, son,*

*And the morning will come soon.*

*I’ll tell you stories of a better time,*

*In a place that we once knew.*

*Before we packed our bags*

*And left all this behind us in the dust,*

*We had a place that we could call home,*

*And a life no one could touch.*

*We are the angry and the desperate,*

*The hungry and the cold,*

*We are the ones who kept quiet,*

*And always did what we were told.”*

--Rise Against: Prayer of the Refugee--

**CONTENT**

**LIST OF ABBREVIATIONS**

| | |
|---|---|
| APA | American Psychiatric Association |
| CINAHL | Cumulative Index to Nursing and Allied Health Literature |
| ICD | International Classification of Diseases |
| Migri | The Finnish Immigration Service |
| PTSD | Post traumatic stress disorder |
| UAM | Unaccompanied Refugee Minor |
| Non-UAM | Refugee minor who has arrived with parents or guardians |
| UNHCR | United Nations High Commissioner for Refugees |
| WHO | World Health Organisation |

# 1 INTRODUCTION

Following the news this year, it has been impossible to ignore the current refugee situation in Europe and Finland. The war in Syria and Iraq and ongoing conflicts in Afghanistan and Somalia have forced millions of people to leave their home and seek shelter outside their country. How will the hardships experienced by these people affect them mentally, especially the vulnerable children? Furthermore, the stressful situations refugees face are not limited to war. The journey to safety and the long asylum seeking process may also cause anxiety.

The focus of this thesis is limited to child and adolescent refugees and asylum-seekers. While both adults and children face similar environmental stress and threats in war-torn countries, children's' mental suffering may be elevated compared to adults due to their lack of coping skills and life experience. Especially defenceless group amongst refugee children are those who have arrived in the new host country alone without their parents or guardians.

In September 2015, the president of German Chamber of Psychotherapists, Dietrich Munz, warned authorities that around a quarter of refugees coming to Germany "had to watch family members being attacked" (Vice 2016).

In an interview with Swedish Radio, psychologist Katrin Sepp talked about asylum seekers: "just last year the number of psychiatric patients at the Södra Älvsborg Hospital increased by 30 percent, and the largest increase was of children and adolescents many of whom suffer from anxiety disorders". (Radio Sweden, 2016)

While Europe is currently dealing with the most pressing part of the crisis –providing food and shelter – much more needs to be done to support the refugees arriving into Europe. At the core of that next level of understanding are mental health problems of refugees, especially the children.

# 2 BACKGROUND

In this chapter, the key definitions are introduced alongside current statistics of refugees in the world, Europe and Finland.

## 2.1 Definitions

In this chapter the definitions of a refugee, asylum seeker, migrant and unaccompanied refugee minor are outlined.

### 2.1.1. Definition of a refugee

According to The United Nations Refugee Agency (UNHCR 2015) the term “refugee” refers to a person who is “fleeing armed conflict or persecution”. The 1951 Refugee Geneva Convention states further that the term refugee applies to a person who has a “well-founded fear of persecution for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country; or who, not having a nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it”. In addition they state that the standard well-rounded fear of persecution does not cover the whole picture, and violations of human rights, serious public disorder and armed conflict also cause people to flee their countries. (The Refugee Convention 1951.)

A refugee receives international protection in the new post-settlement country. If a person is judged not needing such protection, they are sent back to their home country. (UNHCR 2015.) Finland has agreed to receive 1050 yearly quota refugees. These are people, who have been granted a refugee status by UNHCR already prior to settlement to Finland, and therefore do not need to go through the asylum seeking process. (Migri 2016.)

Most people affected by violence in Syria for example, are not properly called refugees or asylum seekers because they have not been able to leave the country. The term internally displaced is used to describe those who are forcibly displaced from their homes but do not leave their countries. (Postel 2015.)

### 2.1.2 Definition of an asylum seeker

An asylum seeker is a person who seeks protection and the right to stay in a foreign state. In other words, an asylum seeker has fled their country of origin, has arrived to a new country, and has registered as a person who needs protection. To seek asylum is considered as a human right. Asylum seeker, therefore, is a person whose refugee status is not yet confirmed. When asylum is granted, (s)he will get a refugee status. (Migri 2016.) An asylum seeker is in a limbo-like state while waiting for the legal decision, usually housed in an asylum seeker reception centre. The national asylum system makes a decision whether the asylum seeker is granted an international protection and status of a refugee. (UNHCR 2015.) In Finland, this national authority is Maahanmuuttovirasto, also called Migri or The Finnish Immigration Service.

Both refugee and asylum seeker are within the scope of this literature review as they represent the same person in different stages of flight. The term refugee used throughout this thesis means both refugee and asylum seeker and vice versa.

### 2.1.3 Definition of an unaccompanied refugee minor

Children under 18 years of age, who are separated from both parents and are not cared by an adult guardian, are referred to as unaccompanied refugee minors (UAM). They are entitled to international protection and require immediate safety and assistance. The United Nations state that they have an increased risk for “military recruitment, sexual exploitation, abuse and violence, forced labour, irregular adoption, trafficking, discrimination and lack of access to education and recreational activities”. (UN General Assembly 2003.)

In Finland, under 16 years old UAMs are accommodated in group homes, much like the child protection service facilities. 16-17 year old UAMs go in supported housing units, housing approximately 40 children. UAMs aged 18 or over are housed in normal reception centres for adult asylum seekers. Each child under 18 gets a representative who looks after the child's best interest. (Migri 2016.)

Because of the growing representation for unaccompanied minors, combined with their seeming vulnerability, UAMs have become an important group of concern with the total population of refugees.

### 2.1.4 Definition of an immigrant or migrant

Migrant is a person who chooses to move and therefore is not within the scope of this literature review.

## 2.2 Global statistics

In the Mid-Year trends 2015 report UNHCR state that the total number of refugees has increased significantly over the four year period. Globally there were 10.4 million refugees in the world at the end of 2011, that number growing to 15.1 million by *midyear* 2015. The main reason for such sharp increase is the war in Syrian Arabic Republic and its effect on neighbouring countries such as Iraq. Globally the Syrians are the largest refugee group, 4.2 million by mid-2015. The Afghan refugee population for the same time period is 2.6 million. Somalia is the third largest refugee country, 1.1 million. Measuring purely by numbers, Turkey, Pakistan and Lebanon are the largest refugee-hosting countries, each hosting over 1.2 million refugees. (UNHCR 2015.)

## 2.3 European statistics

Germany alone lodged 160.000 asylum applications in the first 6 months of 2015 (UNHCR 2015), reaching 315.000 by the end of October (BBC 2015). In fact,

more than 1 million refugees came to Europe in 2015, a vast majority by sea crossing over to Greece and Italy. (BBC 2015.)

## 2.4 Finnish statistics

In total Finland received 32.476 asylum seekers in 2015 (Migri 2016). Comparing with quarter two and quarter three in 2015, there was a +842% increase by quarter four. (Eurostat 2015). 1.628 people have so far been granted a refugee status and international protection. When comparing asylum applications per 100.000 local population, Finland received 4$^{th}$ highest number of asylum seekers in Europe, after Hungary, Sweden and Austria. (Eurostat 2015). In addition to asylum seekers, Finland took 1034 yearly quota refugees.

Of this total number, 3.024 (9.3%) were unaccompanied minors and so far 80 have been granted a refugee status. The top 3 countries of origin were Afghanistan 63%, Iraq 21% and Somalia 8%. (Migri 2016.) A report commissioned by The Finnish National Contact Point for the European Migration Network (EMN) called *"Policies, practices and data on unaccompanied minors in the EU Member States and Norway"* (EMN 2015) states that “the number of asylum-seeking unaccompanied minors has doubled in EU”. In 2015 24.000 unaccompanied minors sought refuge in the EU. Also in Finland the number of unaccompanied minor asylum seekers is increasing. In 2013 Finland received 161, in 2014 196, and in 2015 3.024. (EMN 2015.)

The average processing time for asylum applications in 2015 was 157 days. In December 2015 Finland had 68 asylum seeking centers for minors and 144 for adults, but the number is constantly changing. (Migri 2015.)

## 2.5 Mental health in children and adolescents

The traits of children’s mental health problems are similar to those of adults’ (Huttunen 2015). In children’s mental health, “deviations” from good mental health are usually referred as “problems” or “disorders”. A child’s mental health

is drawn from his or her own charasteristics, the relationship he or she has with parents, family and carers, and by the wider community to which they belong. Some of these factors increase the risk of mental health problems and some act as a protective barrier. Family risk factor may be parental death whereas family protective factor would be having at least one good parent or carer per child. An example of comminity risk factor would be a disaster or discrimination and protective factor good housing and good school. (Pryjmachuck 2011, 265.)

Children's mental disorders are usually divided in to following groups:

1. **Emotional** – includes: post traumatic stress disorder, depression, anxiety, phobias, separation problems such as school refusal
   These are also called *internalising disorders*
2. **Conduct** – includes: Behaviour problems such as defiance, aggression, temper tantrums, non-compliance, fire setting, early sexual activity, destroying property, harming people
   These are also called *externalising disorders*
3. Hyperkinetic – includes: Attention deficit disorder
4. Developmental – includes: Delay in developing skills
5. Eating related – includes: Anorexia, bulimia, overeating, obesity
6. Self-harm – includes: Cutting, self-poisoning, substance abuse
7. Psychotic – includes: Schizophrenia (Pryjmachuck 2011, 296.)

## 2.6 Mental health in complex emergencies

Trauma can be described as an event when a person loses the protective barriers that makes them feel safe. With refugees we no longer talk about warning signs for risk of trauma, but actual events in that persons life, the worst nightmares and situations. Trauma phenomenon caused by fleeing home is extremely complex. When a person is separated from their home and loved ones, they lose their identity and uprooting. He or she may experience strong anxiety for being persecuted or threatened to be destroyed physically or psychologically. (Pakaslahti & Saraneva 2010, 195.)

For these reasons refugees and asylum seekers are a particularly vulnerable group for mental health disorders. The mental health problems may have repercussions for as far as second or third generation refugees. In fact, the largest discrepancy in health between refugees and Finnish native population is mental health. The risk factors for refugee mental health derive mostly from the traumatic experiences including torture, violence, life threatening flight from home, separation from family and concern for family and dissarray in the home country. (THL 2014.)

Mental health problems of refugees can be split in to three separate stages, depending on the status of their journey. *Pre-flight* means the time when the person is still living in his or her own country, before the the escape journey has started. They may be living in a war zone, conflict area or are experiencing a social collapse of their country. *During flight* is when the refugee is “on the road”, and is escaping the home country to seek safety in a new state. A study by UNHCR (2010, 20-22) which interviewed 150 Afghan UAMs reported that their journey lasted on average six months. Experiences on the road included “sleeping rough, living in cramped and unsanitary conditions, physical abuse by smugglers and government officials, witnessing death of friends and living in near-constant misery”. *Post-flight* means the time when the refugee has arrived to a new country or desitination and is seeking asylum and protection. Aspects associated with the asylum decision, such as number of changes between centers and prolonged stay in the asylum center may adversely affect their mental health (Nielsen et.al 2008).

A large (n=3000) Finnish research concerning immigrant health show that as many as 78% of Kurdish, 57% of Somalis and 23% of Russians had experienced trauma in their home country (Castenada et.al 2012, 11). While this reseach covered adults and both immigrants and refugees, it gives some insight to the experiences of trouble. The most common traumatic experiences were living in a war zone, and seeing someone die violently (Castaneda et.al 2012, 152). Another research by Pirinen (Pakaslahti 2010, 184) found that 57% of adult asylum seekers have experienced torture and further 12% other violence. Torture can be

either physical, such as beating, water boarding and suffocation, or psychological such as sleep deprivation and isolation. In torture the aim is to destroy the person physically and mentally. Its objective is to uncreate the blocks of personality, wipe away the concept of goodness in victim's mind and demolish basic trust in people and society. (Pakaslahti & Saraneva 2010, 202.)

## 2.7 Post traumatic stress disorder

Psychological trauma is typically divided in to four categories: physical threat or violence, separation, loss and catastrophic situations such as war (Pakaslahti & Saraneva 2010, 195). Post traumatic stress disorder (PTSD) can therefore occur after experiencing or witnessing a traumatic event. The event is usually life threatening or likely to cause serious injury. (Chowdhury & Pancha 2011.) It is a mental health disorder that belongs to the group of anxiety disorders (Pryjmachuck 2011, 209; Pinto & Schub 2015).

WHO discloses that while some existing factors such as personality traits or previous history with mental illness may lower the threshold for developing a PTSD, they do not provide sufficient explanation for its occurrence (WHO 2016). People who have the highest risk to PTSD include those who have been exposed to war, combat, life threatening accidents, flood, fire, terrorist incidents, personal attacks such as rape, natural disaster or have witnessed injury or death (Gradus 2007 according to Salem & Flaskerud 2010; Huttunen 2014; Pinto & Schub 2015, APA 2011). The most common symptoms for PTSD are obsessive thoughts, flashbacks, nightmares, shock reaction when seeing people reminding of the trauma event, physical symptoms such as tachycardia, sweating and fatigue, insomnia, chronic pain, headache, memory and concentration problems, anxiety, nervousness and being afraid and easily startled.

Usually PTSD occurs within 3 months of the traumatic experience, but trauma symptoms may not occur until several years after the experience. (Huttunen 2014; Pinto & Schub 2015). The symptoms may dissapear over time, but more often persist for many years (APA 2011). PTSD can be either acute or chronic,

depending on the length of the symptoms. The threshold is 3 months; acute PTSD last less and chronic lasts longer than 3 months. Chronic PTSD is a risk factor for depression, sleeping disorders, memory problems, self-harming, suicidal ideation and alcoholism. (Huttunen 2014, Pinto & Schub 2015, APA 2011.), possibly even leading to personality change (WHO 2016).

## 2.8 Children, adolescents and PTSD

Children and adolescents can also get traumatised. A child is dependent on his or her parents and is mentally not fully developed. In a traumatic event, the child's development is ceased and they lose their childhood.

The symptoms are categorised in three main groups:

1. Re-experiencing the trauma, *"intrusion symptoms"*

- Symptoms include: nightmares, flashbacks, play re-encactment, distress at events that remind of trauma (Chowdhury & Pancha 2011).
- The flashbacks tend to occur all of the sudden and be so powerful that the person feels like they are fully re-experiencing the trauma or seeing it unfold before their eyes (APA 2011).

*2.* Avoidance and emotional numbing, *"avoidance symptoms"*

- Symptoms include: reducing of play, social withdrawal, decreased interest in activities or hobbies that were previously enjoyed, loss of developmental skill that were already acquired (Chowdhury & Pancha (2011).
- The avoidance symptoms are those that affect the person's relationships with others. They may feel numb and only able to complete mechanical routine activities. If the person with PTSD has not been able to work out the grief, the trauma can continue to affect their behaviour without them being aware of it. The person may feel guilty for having survived something others have not. (APA 2011.)

*3. Hyperarousal symptoms*

- Symptoms include: Night terrors, difficulty to sleep, angry outbursts, increased physiological arousal, decreased concentration, destructiveness (Chowdhury & Pancha (2011).
- PTSD may cause them to act fearful and like they are constantly threatened by the trauma. They can explode in anger without provocation. They may not be able to concentrate or may develop insomnia. This constant feeling of dread causes them to have startled reactions to seemingly innocent approaches, such as loud noises or someone touching them (APA 2011.)
- It is not uncommon for the person to self-medicate to numb the trauma. When a person has a severe PTSD, they may have poor impulse control and thus are a risk group for suicide (APA 2011).

Presentation of symptoms varies with age. Children aged 5-15 can experience a "time skew" in which they mis-sequence the events. "Omen formation" means that the child believes there were warning signs that predicted the trauma. They may also compulsively repeat some aspects of trauma, for example increase in shooting games. Teenagers and adolescents are more likely to incorporate aspects of trauma into their everyday lives. Adolescents are also more likely to exhibit impulsive and aggressive behaviours. (Chowdhury & Pancha 2011.)

Children can be affected directly from a personal exposure to trauma, *and* by adults' reactions. Parens' reactions to events can influence child's capability to recover from the traumatic event (Pinto & Schub 2015). Younger children are usually not able to express their trauma or fear verbally and diagnosing them can be challenging. Children may feel uncomfortable or fearful of upsetting others, or simply unable to verbally express the traumatic experience (Pinto & Schub 2015.) Children often complain of stomach aches and headaches in lieu of verbally expressing the anxiety (Chowdhury & Pancha 2011). Other mental disorders such as depression, separation anxiety, panic disorder, personality disorders, substance abuse, conduct disorders such as sexually aggressive behaviour, and anxiety are strongly connected to PTSD in children. (Chowdhury & Pancha 2011; Pinto & Schub 2015; Trauma ja dissosiaatio 2016.) Recently a link has been

found between PTSD and eating disorders. 23% - 25% of eating disorder patients met the diagnosis of PTSD suggesting that PTSD is a risk factor for developing an eating disorder (Tagay et.al 2014).

PTSD in childhood or adolescense is not common; its incidence is approximately 0.4%. Around 14% - 43% of children experience a traumatic event in their childhood, and of these 3% - 15% develop PTSD. For adolescents, that number is 3.7% - 6.3%. It is twice as common in girls than boys. (Meltzer et. al 2000 via Chowdhury & Pancha 2011; Pinto & Schub 2015.)

Children and adolescents who are survivors of neglect, kidnapping, school violence, war, physical or sexual abuse, terrorist attacks, bullying, natural or man-made disasters, car accidents, life-threatening illness or injury, or have witnessed harm or death of a loved one, suicide or murder, have a high risk of developing a PTSD (Chowdhury & Pancha 2011; Pinto & Schub 2015).

# 3 AIM AND RESEARCH QUESTIONS

The purpose of this literature review is to examine, based on the current original research, what is known of the mental health problems of child and adolescent refugees and asylum seekers.

The research questions are:

1. What are the most common mental health problems amongst child and adolescent refugees?
2. What is the prevalence of the most common mental health problems?
3. What are the factors that contribute to those mental health problems?

# 4 RESEARCH METHODOLOGY AND DESIGN

Permission for this Bachelor's Thesis was commissioned by Turku University of Applied Sciences. (Appendix 1)

Literature review was chosen as the methodology for this Bachelor's Thesis. In this chapter the author outlines what a literature review is and how it is useful for the purpose of this Bachelor's Thesis.The objective of a literature review is to provide an overview on a topic.

Khan et. al (2004) say that a systematic literature review is "a review of the evidence on a clearly formulated question that uses systematic and explicit ways to identify, select and critically appraise relevant primary research and to extract and analyse data from the studies that are included in the review" (Gerrish & Lacey 2007, 317). It is also called "secondary review" or "research on research" because literature review uses existing primary studies that are relevant for the research purpose. It aims to be systematic (literature chosen is clearly identified), explicit (clear in its statements of objectives, materials and methods), reproducible (data search can be produced by anyone else, methodology and conclusions can be recreated). (Greenhalgh 2000 via Gerrish & Lacey 2007, 317.)

The advantages of systematic literature review compared to original research study are numerous. Large amounts of text and information can be incorporated quickly and efficiently, the exact methods in data search helps to avoid bias in excluding and including studies, the results of different studies can be formally compared side by side to synthetise results, the reasons for inconsistencies in different studies can be identified easily and new hypotheses generated based on these inconsistencies. Considering all of these benefits, the conclusions in literature review are considered more reliable and accurate compared with conclusions in original primary studies. (Gerrish & Lacey 2007, 318-319.) The benefit of this method is that it allows the author to look at several original studies at once, synthetise and reach conclusions.

The disadvantages of systematic literature review are that validity, quality or reproducibility of the results cannot always be guaranteed. For example, the reviewer may have chosen low quality Randomised Control Trials, cohort studies or observational studies for the review. The reviewer may not specify the search process, making it possible to leave out relevant research (Manterola et.al 2011).

The goal of a literature review is to summarise the existing evidence on a particular topic. The author's aim is to provide reliable results regarding the mental health problems of child and adolescent refugees, an area that is not broadly studied in Finland.

According to Gerrish & Lacey (2007, 319), the stages of literature review are:

1. Writing a research plan, outlining the purpose and aim of the study
2. Systematically searching the literature and documenting the search
3. Selecting the applicable studies
4. Appraise the quality of the studies chosen
5. Extracting the key information from the selected studies
6. Summarising, interpreting and presenting the findings
7. Writing up a structured research paper

## 4.1 Literature search process

In this chapter the author discloses the stages 2 and 3 ("Systematically searching the literature and documenting the search" and "Selecting the applicable studies**"**) from stages of literature review as provided above.

The aim of literature search was to find ten to fifteen primary research articles on refugee minor mental health, including articles specifically focusing on unaccompanied refugee minor mental health. The process of literature search is discussed in this chapter. While journal articles were accepted for the introduction and background part of the thesis, only original research articles were searched for the literature review and results of the thesis. The goal of this chapter is to give a

transparent picture of the data search for the reader so the search can be repeated following these steps.

Because the chosen research method for the Bachelor's Thesis is a literature review, particular attention must be paid into data search. Thorough and unbiased data collection is the foundation of a literature review. It is important that each research article that answers the research question is found during the literature search and nothing is left out without a valid, stated reason. This accounts for the reliability of this review. As stated by Khan et. al (2001: 2), the aim of literature data search is "To provide a list as comprehensive as possible of primary (original) studies, both published and unpublished" (Gerrish & Lacey, 321). For this reason, each step of data collection is outlined in this chapter in detail.

It is more important to choose a reliable research article with good methodology than go by its findings alone. Similarly, in order to eliminate bias, it is necessary to comb through all the applicable databases as thoroughly as possible in order to avoid neglecting an important research article. This means that for literature review, the reviewer will have to go through a larger amount of articles than for project work (Gerrish & Lacey, 323). These "complete search" steps are described next.

### 4.1.2 Literature search

Searching the word "refugee" in CINAHL database alone brought 5032 results, so more planning for data search was needed.

Planning is an important part of data search and helps focus (Flemming 1998 via Gerrish & Lacey 2007, 95). PICO model was used to streamline the literature search. It is a model that helps the author to start a wide search and filter according to the research question, while critically appraising the results on the way.

PICO stands for:

**P**atient/Problem; who are the patients? What is the problem? (refugee)

**I**ntervention; what do we do to them? What are they exposed to? (war trauma, mental health problems)

**C**omparison; what do we compare the intervention with? (not applicable)

**O**utcome; what happens? What is the outcome? (most common mental health problems, prevalence, factors that cause them)

PICO may help to get accurate results by implementing a search word for each of those topics and combining them. This is usually demonstrated in a table. (Gerrish & Lacey 2007, p 95.) These search terms are shown above in brackets.

It was necessary to come up with as many synonyms for each search word as possible. These are demonstrated in the PICO table, see table 1. After this, Boolean operators were implemented. By adding an “or” to the search field, the database yielded results for all the different words used in the search field, making it ideal for synonyms search. Also it is beneficial to use all the PICO words in search at the same time, and here a Boolean operator “and” is used. (Gerrish & Lacey 2007, p 97.) Most search engines have separate search fields for “and” function.

Once the list of search words and synonyms was complete, a truncation mark was added to some words. Usually it is either * or $. This enables free text search and again, eliminates bias. For example, truncating adoles* allows the search engine to search words “adolescent” “adolescents” and “adolescence”. A full list of words used and applicable Boolean operators can be seen in the PICO table (Table 1)

Data search for literature review was done at 14th and 15th of January 2016, utilizing Turku University of Applied Sciences nursing science databases The Cumulative Index to Nursing and Allied Health Literature (CINAHL), Cochrane Library, Medline (Ovid), PubMed and Science Direct. These databases have been

proven to produce reliable and accurate results applicable to nursing science. Multiple databases were chosen to make sure all articles related to the research questions were found.

All these practices in place still harvested a fairly large amount of results in CINAHL, 469 articles in total. Next, the inclusion and exclusion criterion was set.

Inclusion criteria for approved articles were:

1. Full text articles with abstract
2. The research articles were published between the years 2000-2016
3. Original, peer reviewed research articles
4. The research must be about children and adolescents

Exclusion criteria for the articles were:

1. Results on adult refugees
2. Other languages besides English
3. Older than published in 2000
4. Research articles only on *immigrant* mental health

CINAHL database still brought 122 suitable results. While working this sizeable list of results to a smaller quantity is laborious and manual, it enables the researcher to look at everything and not leaving anything out, thus contributing to the reliability of the research. Firstly, the headlines were read and 58 articles were chosen, meaning 64 articles were excluded based on their headlines not meeting the criteria or research question. Headlines that were excluded at this stage were either solely concerning adult refugees or were in the area of social services or specific mental health interventions. The net was still kept wide at this headline sorting stage, to make sure nothing is left out that should be in. One was removed as a duplicate article.

It was noticed that CINAHL database returned slightly different list of articles when the truncation marks of the search words were removed. After removing

the duplicates from the truncated search, 12 new articles were found based on the titles. Additionally, it was noticed that despite synonyms and truncation marks, further results could be yielded using the same words but fewer at the time, for example just “refugee” and “child”. For that reason, some additional database searches in CINAHL and Science Direct were completed and added to PICO table.

These steps were repeated for all chosen databases.

### 4.1.3 Literature selection

Once the search steps were repeated for all databases, there were in total 148 articles chosen by the title. This number had to be further diminished. An Excel spreadsheet was compiled for the next stage to facilitate sorting, filtering, exclusion and duplicate finding. With Excel it was simple and reliable to filter by certain content in order to choose the final articles for the literature research. Filters were applied to the following headers: database used, was child, mental health and refugee (and their synonyms) mentioned in the article title, was full text available, was the abstract relevant to the research question, and was the article an original research paper and what the PICO search method was. Excel also automatically calculates the records found after filtering, making it easy to fill the numbers to PICO table.

Then the abstracts of these 148 articles were read. They needed to answer the research questions.  In addition to that they had to be original research articles. Excluded articles involved interventions, purely social work aspect, somatic illnesses only, health promotion and no children involved. Also more non-full text articles were excluded.

After reading the abstracts, 25 original research articles seemed to be able to meet the review aim. These 25 research articles were fully read in order to have the final list of original research articles. Excluded articles involved non-mental health problems (such as financial problems), protective factors, pre-flight trauma correlation on mental health, university student refugee study, a study looking

only at PTSD. Once full texts were read, 13 research articles still fit the literature review criteria.

In addition to database searches, a manual search was performed to make sure nothing is left out and to remove bias (Gerrish & Lacey 2007, 100). In manual search the author combed through the reference list of literature reviews covering the review topic, and found further two research articles, making the total number of articles chosen as 15.

## 4.2 Characteristics of the articles

All the 15 articles were primary quantitative research. 14 of these were surveys; one was a medical record study. In a survey the researcher administers a questionnaire or questionnaires to the study population to find out opinions, experiences, demographics or behaviours (Maltby et.al 2010, 38). Of the 14 surveys, nine were self-report surveys, where the refugee youth answered a set of questionnaires themselves. Three were a combination of self-report surveys and teacher or social worker surveys. One was purely a parent and social worker survey and one was a combination of medical coding and doctor survey. There are two types of survey designs, longitudinal and cross-sectional. A longitudinal survey uses the same survey to observe the phenomenon over a period of time. For example depression rates amongst refugee youth upon arriving to the new host country vs. 12 months later. It studies a change over time. They are also called follow-up surveys. (Maltby et.al 2010, 40.) A cross-sectional survey paints a picture of what might be happening in a sample or population. They can also be called prevalence studies. Maltby et.al (2010, 39) describes it being like a snapshot that describes that sample population at the time of the survey. Three of the surveys were longitudinal and the rest, 12 were cross-sectional.

The research articles were published between 2006 (Bean et.al) and 2015 (Ramel et.al). Three of the studies had the same main researcher, Derluyn (2007, 2007, 2008). Each of these had a different research aim, and the previous findings were utilised as a stepping stone for the next study.

The actual research was conducted in Belgium (n=4), The Netherlands (n=2), UK (n=2), Denmark (n=2) one each for Australia, Italy, Sweden, Norway and USA and the articles published in those countries accordingly.

Of the 15 articles, 9 measured and discussed the stressful events, either pre-, during- or post flight, which may affect mental health. All of the articles had statistics of refugees' parents or the lack of them.

### 4.3 Surveys used

The following readily available surveys were used in the studies: The Hopkins Symptom Checklist-37 for Adolescents, (HSCL-37A), Strengths and Difficulties Questionnaire (SDQ-self and SDQ-teacher), Stressful Life Events (SLE), Reactions of Adolescents to Traumatic Stress Questionnaire (RATS), Child Behavioral Checklist for 6-18 year olds (CBCL/6-18) and its modification Child Behavioral Checklist Guardian report (CBCL/4/18), Teacher's Report Form (TRF), Daily Stressors Scale for Young Refugees (DSSYR), Harvard Trauma Questionnaire (HTQ), Impact of Event Scale (IES), Birleson Depression Self-Rating for Children (DSRSC), Attitudes to Health and Services Questionnaire (AHSQ), Coping Style Questionnaire (CSQ), Crisis Support Scale (CSS), Youth Self Report (YSR).

Most research articles used more than one questionnaire. The most used surveys were The Hopkins Symptom Checklist-37 (n=7), Stressful Life Events (n=7), Strengths and Difficulties Questionnaire (n=4) and Reactions of Adolescents to Traumatic Stress Questionnaire (n=5). The Hopkins Symptom Checklist-37 is a survey used to detect elevated levels of anxiety, depression and externalising behaviour. The Strengths and Difficulties Questionnaire is a survey that screens behavioural attributes, generating scores for emotional and conduct problems. The Stressful Life Events investigates the traumatic experiences, what kind they are and how many. They answer yes or no to twelve different kinds of stressful events such as separation and war. The Reactions of Adolescents to Traumatic Stress Questionnaire reports specifically levels of PTSD, parallel to the DSM-IV criteria.

## 4.4 Demographics of the participants

The sample size varied between 71 and 8047. The total sample of refugees was 13.163, averaging as 877 per research. The youngest participants were under four years old and the oldest were 21. Most participants were aged 11-18. These are shown in a table 2.

## 4.5 Content analysis

The next step towards understanding and presenting the results of the 15 articles was to complete a content analysis. The content analysis starts with classification, also called coding. It is a way of organising the data (in this case the research articles) systematically into categories (Le May & Holmes 2012, 87). The process involves a thorough reading of the results, discussion and conclusion paragraphs of each article. While having the research aim and question as the focus, certain themes and ideas will crystallise during the reading process. (Le May & Holmes 2012, 87.) In the inductive content analysis technique, as used here, the coding starts with small details and categories and themes are developed during analysis.

# 5 RESULTS

A preliminary analysis was conducted on the main characteristics of the articles. The results of this initial analysis can be seen in a Table 3. Once that was done, a table was created to help in coding and finding common codes and themes. Once the content analysis was completed, 11 codes were found. These are PTSD, depression, anxiety, age, gender, family, daily stressors, time spent in the new country, living situation, asylum status, traumatic events. This coding can be viewed in Table 4.

The categories emerging from the codes were formulated as per the research questions: Most common mental health problems, prevalence, personal factors and external factors. These were further grouped to two main themes: Mental health problems and factors contributing to them. The results were revealed within these categories. The themes, categories and codes can be seen visually in a tree chart. (Picture 1)

## 5.1 Most common mental health problems

This paragraph answers the research question “What are the most common mental health problems among refugee minors?” The results of the literature review showed that the most common mental health problems of refugee children and adolescents are PTSD, depression and anxiety. 12 research articles out of 15 had findings on these three mental health problems (the remaining three studies did not specifically measure any mental health problem prevalence). PTSD, depression and anxiety are all internalising problems. Nine studies also measured externalising problems, but only six of them discussed those results. These studies indicated that externalising problems are far less common than internalising problems and therefore not considered as the most common mental health problem amongst refugee youth.

Several studies found elevated mental health problems with refugee children or adolescents compared to native non-refugee peer population. Italian peers were

compared to unaccompanied refugee minors. The UAMs were likelier to be classified with both internalising and externalising problems, and those differences were significant. 74% Italian adolescents did not report any mental health problems, compared with 26% of UAMs who reported no problems. (Thommassen et.al 2012.) This finding was supported by Bean et.al (2006) who measured internalising scores (especially PTSD) of UAMs and compared them to Dutch peers. The results showed that *all* UAM minors at arrival to The Netherlands had inflated mental health problem scores in comparison to Dutch peers. Nielsen et.al (2008) who studied accompanied refugee children stated that these children have "notably worse mental health than European background population". Derluyn et.al (2007) established that refugee youth had significantly higher PTSD scores than Belgian peers and refugees also had more peer problems than Belgians. However, this study found little difference in anxiety, depression and emotional problem scores between refugee youth and Belgian youth. Especially the anxiety score was nearly the same in both groups. Belgian peers scored higher for externalising problems, specifically hyperactivity.

## 5.2 Prevalence

This paragraph answers the research question: "What is the prevalence of the most common mental health problems?" Comparing the prevalence of the most common mental health problems was a challenging task. This was because the studies reported the results in various different ways. They may have used different cut off points for severe (=borderline) and very severe (=clinical) symptoms and report either both or just one of those scores. Not all studies have used the same surveys to measure the mental health problems. Some research results reported prevalence estimation and some only percentages above cut off points. Some studies categorised the mental health problems in just internalising and externalising disorders, while some studies categorised them by diagnosis while a few just spoke generally of "mental health disorders". Some studies had teacher, parent or social worker reports at their disposal, while some had self-reports. Variables, such as where does the refugee child live, play a significant

role in the prevalence rates, and it has to be noted that not all studies have the same variables. Only a couple of studies made any reference on how the results measure up against native peer population. However, where narrative has been provided, clues can be found in words such as “significant” or “severe”, so faith is put in these words as reported by researchers.

### 5.2.1 PTSD prevalence

PTSD prevalence for UAMs ranged from 31% to 66%. On arrival to the new host country, Bean et.al (2006) found the PTSD rate at 50% and at 49% on follow up 12 months later and called it a severe result. A PTSD level of 44% was reported by Derluyn & Broekaert (2007) including both severe and very severe results. Thommassen et.al (2012) stated 48% while Sanchez-Cao had a result of 66% and Jakobsen et. al (2014) which measured the PTSD four months after arrival, found it to be 31%. A total PTSD prevalence rate of 51% was discovered by Derluyn et.al (2008) of which 37% was at very severe level. Vervliet et.al (2013) found the PTSD rate as 48%

For accompanied refugee youth results, Elkiet et.al (2012) reported the PTSD levels at 38% - 43% and in addition 14% of participants were one symptom short of PTSD. In the study by Derluyn et.al (2007) in which 58% of participants were UAMs, the PTSD rate was 27%.

### 5.2.2 Prevalence of depression

The rates for depression varied greatly from study to study, from 16% to 50%. Derluyn & Broekaert (2007) reported 47% depression prevalence, Bronstein et.al, (2012) 23% and Vervliet et.al (2013) 33%. Bean et.al (2006) found internalising problems as 50% at arrival and 46% at one year follow up. Jakobsen et.al (2014) found depression on 16% of participants adding up major depression disorder, dysthymic disorder and mood disorder with depressive features. Derluyn et.al (2007) found the prevalence of depression to be 19%, and in their comparison with Belgian peers they found only a small difference, as the peers reported 16.3% depression rate. Derluyn et.al (2008) found the depression rate as 46%

including both severe and very severe symptoms. Saches-Cao et.al (2012) reported 12% of the surveyed youth above cut off point for depression.

Thommessen et.al (2012) stated that 81.5% of the UAMs had internalising and externalising problems compared to 18.5% of the Italian peers. Betancourt et.al (2012) reported internalising problems at 17%.

Ziaian et.al (2011) divided the results between parent and teacher reports. According to the parent reports 10% of children and 14% of adolescents had emotional and behavioural problems. According to the teacher reports 34% of adolescents and 26% of children have emotional and behavioural problems. In the teenager self-reports, the problem percentage was 10.3%. These numbers include both severe and very severe scores.

### 5.2.3 Prevalence of anxiety

The prevalence for anxiety ranged from 14% to 45%. Derluyn & Broekaert (2007) reported 37% prevalence for both severe and very severe anxiety. Bronstein et.al (2012) had very similar figure at 35%. Vervliet et.al (2013) found anxiety rate at 26%. Derluyn et.al (2007) practically no difference between refugee and Belgian peer: 23.4% and 23.3% respectively. Jakobsen et.al (2014) concluded that 14% of refugee minors suffer from anxiety disorders. Derluyn et.al (2008) found severe and very severe anxiety at 45%.

### 5.2.4 Additional notes on prevalence

A large (n=8047) medical record accompanied refugee youth research by Goosen et.al (2013) reported that 13% had at least one mental health problem in the first 6 months after arriving in The Netherlands. However, during the whole longitudinal study period (one year and over), the mental health problem prevalence was 26%. 31% of minors according to Bronstein et.al (2012) scored high or very high for emotional and behavioural problems.

Swedish research (Ramel et.al 2015) which concentrated on finding out the occurrence of refugees minors receiving in-patient psychiatric care, found out that 3.4% of UAMs in their catchment area received in-patient care. Of these 0.64%

were admitted involuntarily. When comparing with native peers, the in-patient care frequency of Swedish youth was 0.26% and 0.02% for involuntary care. In the same study, the doctors treating the refugee minors were sent a questionnaire. It revealed their estimation for self-harm or suicidal behaviour amongst in-patient admitted UAMs as 76% and 58% for non-UAMs.

Nielsen et.al (2008) used both teacher reports and self-reports and established that the teacher reports indicated 45% of prevalence rate for severe or very severe mental health problems amongst refugee minors. Focussing on 11-16 year olds and combining teacher and self-reports, the study found 58% showing evidence of any type of mental health problem.

Jakonbsen et.al (2014) who surveyed the UAMs shortly after their arrival in Norway stated that 42% of them filled diagnostic criteria for mental health disorder.

The Australian research conducted by Ziain et.al (14) reported different figures to others. In their study, 11% of the refugee participants had severe or very severe mental health problems and their estimation for prevalence is 6.7% stating that most seem to coping well and that 90% of adolescents on their self-reports scored a normal result.

## 5.3 Factors contributing to mental health problems

This chapter answers the research question “What are the factors contributing to refugee minors’ mental health problems?” Based on the literature review, the contributing factors can be divided in to two main categories; personal factors and external factors. For personal factors the results showed the following individual contributors: Gender, age and family situation. For external factors the results showed the following individual contributors: Daily stressors, time spent in the new host country, living situation, asylum seeking status and traumatic experiences.

### 5.3.1 Age

According to the literature, age is not a major contributing factor for refugee child and adolescent mental health problems (Derluyn & Broekaert 2007, Derluyn et.al 2007, Betancourt et.al 2012, Elklit et.al 2012 and Derluyn et.al 2008).

Some research found support that older children have more mental health problems than younger children. Bean et.al (2006) discovered that older adolescence is significantly related with increased internalising and externalising problems, as well as PTSD. Likewise Derluyn & Broekaert (2007) suggested that specifically 17 and 18 year old UAMs had more depressive syndromes, and hypothesised that as the refugee adolescents get near of legal age, they might fear of losing their permit to stay in the country. Similar age related result was brought by Nielsen et.al (2008) who concluded that older children showed more emotional problems than younger children, but younger children showed more externalising problems, mainly hyperactivity. The risk of mental health problem was higher for boys in the 4-11 age group, and for girls in the 12-17 age group (Goosen et.al 2013).

### 5.3.2 Gender

Girls suffer more than boys according to six research findings. Girls reported higher internalising scores for anxiety and depression (Bean et.al 2006, Derluyn & Broekaert 2007, Nielsen et.al 2008, Derluyn et.al 2007, Betancourt et.al 2012, and Derluyn et.al 2008). Girls also reported higher PTSD symptoms (Bean et.al 2006, Derluyn & Broekaert 2007, Vervliet et.al 2013, Derluyn et.al 2007, Elklit et.al 2012). The girls' PTSD scores over boys were "significant" (Vervliet et.al 2013, Elklit et.al 2012). Higher avoidance scores (Derluyn et.al 2007) and withdrawn syndrome (Derluyn & Broekaert 2007) were also found for girl gender.

Conversely, several studies (Nielsen et.al 2008, Derluyn et.al 2007, Ziaian et.al 2011) found that boys scored lower on pro-social behaviour. This means girls exhibited more helpful and rule obeying behaviour than boys. Nielsen et.al (2008) found this difference to be significant. Boys also had more externalising problems, such as hyperactivity and other behavioural problems. One study found that on

11-16 age group self-reports girls reported more emotional problems and boys reported more behavioural problems, but otherwise there was no overall gender difference. (Nielsen et.al 2008)

### 5.3.3 Family situation

Several studies have found that family situation is a significant predictor for mental health problems for refugee youth. Separation from both parents appeared to be an important factor for mental health issues and contributed to higher rates for depression, anxiety and PTSD significantly (Derluyn & Broekaert 2007, Derluyn et.al 2007, Ziaian et.al 2011, Vervliet et.al 2013 and Derluyn et.al 2008). Minors who were fleeing home without their parents faced a larger number of traumatic events (Derluyn & Broekaert 2007, Derluyn et.al 2008) but also those who were living with just their mother experienced considerably more traumatic events than those who were living with both parents, thus separation from their father increased the risk for experiencing trauma (Derluyn et.al 2008). Boys fleeing with one or both parents experienced more traumatic events than girls, but unaccompanied girls experienced more traumatic events than boys (Derluyn et.al 2007).

Refugee minors with an intact family or at least some connectedness, such as family members or relatives living in the host country (even in the case of UAMs) worked as a protective barrier for mental health (Betancourt 2012, Bean et.al 2006).

Ramel et.al (2015) studied unaccompanied refugee youth as psychiatric in-patients. Their main finding was that UAMs were “markedly overrepresented in both voluntary and involuntary psychiatric care”. In fact, UAMs represented 21% of all patients in the first treatment and 39% of all patients in involuntary care.

Other risk factors in terms of family were mother’s PTSD diagnosis, or living with just father. Goosen et.al (2013) found that 14% of the refugee children’s mothers had been diagnosed with PTSD and this resulted as an increased risk for the child’s mental health distress. Derluyn et.al (2008) mentioned that those adolescents who lived only with their father, showed more PTSD symptoms. Betancourt

et.al (2012) did not find difference in mental health for those living with one parent versus both parents.

UAMs show less externalising conduct problems than their accompanied refugee peers (Derluyn et.al 2007). The refugee youth living with one parent had lowest conduct problems (Derluyn 2008).

### 5.3.4 Time spent in the new host country

Five studies found that the length of time spent in the new host country is not related to the level of mental health problems. Furthermore, findings indicated that unlike previously thought, there did not appear to be a short period of mental wellbeing right after arriving in the new country (Jakobsen et.al 2014).

The levels of anxiety, depression or PTSD did not appear to be decreasing over time, and the baseline measurement at arrival for any given mental health problem was the strongest indicator for a mental health problem still persisting 12 months later (Bean et.al 2006, Vervliet et.al 2013, Derluyn et.al 2007, Elklit et.al 2012, Derluyn et.al 2008). PTSD levels remained continuously high at different points in time (Bean et.al 2006). The number of *newly* recorded mental health problem rate decreased over time (Goosen et.al 2013). This does not mean the prevalence of previously recorded risk for mental health issues is decreasing, but rather that there are fewer new cases over time.

Some specific time related results showed that the time refugees lived in the host country had a significant influence only on intrusion symptoms out of all mental health disorders. The minors, who had lived in the host country for two years or more, reported the lowest intrusion symptoms (Derluyn & Broekaert 2007). Intrusion is a PTSD symptom where memories of trauma arise unexpectedly. Those symptoms include flashbacks and nightmares (APA 2011). Pro-social scores were better, the longer time the refugee had lived in the host country (Ziaian et. al 2011). Time spent in a host country had a significant correlation on externalising conduct problems, indicating that the longer the refugee children are in the country, the more behavioural problems they have (Bronstein et.al 2012).

### 5.3.5 Daily stressors

Only one study (Vervliet et.al 2013) looked at daily stressors. They found that the number of daily stressors increased over time, particularly those related to discrimination. In addition difficulties in peer and adult relationships, worries about residency, insufficient food, clothing, money, being unhappy with educational situation, missing family and uncertainty about future lead to significantly increased symptoms of depression, anxiety and PTSD.

### 5.3.6 Living situation

The place of residence and number of transfers between asylum centers play a significant role on anxiety, depression and PTSD according to the literature review. Studies concluded that the more transfers between asylum centers and the larger the asylum center, the worse the refugee minors' mental health status.

In a study where 30.5% of the minors had been transferred at least one time to another asylum center, findings indicated a significant association with PTSD and internalising problems. Also significantly more anxiety, depression and PTSD were found on minors who lived in a large scale refugee center versus other types of smaller residential settings (Bean et.al 2006.). The influence of the place of residence on mental health was one of the goals of research for Derluyn & Broekaert (2007). The study included only UAMs. In that study, 39% of the refugee adolescents lived in a large scale asylum center, 32% in a small scale asylum center, 8% in foster care, 17% alone and 4% in other type of small scale residence. Their results revealed higher scores for depression, anxiety and PTSD for those who lived in a large scale asylum center and second highest scores for those lived in a small scale asylum center. Those living in foster care or alone, had better scores for anxiety and depression. The depression score was the lowest for those adolescents who were living alone. This result was backed up by Bronstein et.al (2012) who concluded that minors living in foster care had significantly lower scores for anxiety, depression and behavioural problems.

In a longitudinal study where the mental health status was measured at six months and 18 months (Vervliet et.al 2013), two adolescents had become homeless during the study period. This had a significant impact on a higher mental health problem score. Another significant influence on worse mental health score was being forcibly and repeatedly moved between asylum centers. Likewise, children who had stayed in four or more places had an increased risk for developing mental health problems. The probability for newly reported mental health problem was found to be 39% - 65% for 4-13 relocations (Nielsen et.al 2008).

A large (n=8047) longitudinal research by Goosen et.al (2013) studied specifically the influence of frequent relocations on accompanied youth's newly recorded mental health problems. 40% of their study sample had undergone three or more relocations between asylum centers. Just 4.5% of the children and adolescents had not been relocated at all. Their finding was that those who had an annual relocation rate of more than one per year; the risk for recorded mental health problem was 2.7 higher than for children with low annual relocation rate.

### 5.3.7 Asylum seeking status

Residential status was found to be a significant factor for mental health problems (Bean et.al 2006, Ramel et.al 2015, Nielsen et.al 2008, Jakobsen et.al 2014, Vervliet et.al 2013).

In a research by Bean et.al (2006), 41% of refugee children had received a temporary residential status. Those who had not obtained a temporary residence had significantly higher internalising problems and PTSD. The impact of age assessment was found to be a significant association for lower mental health score (Vervliet et.al 2013). 86% of UAMs in a study by Ramel et.al (2015) had mental health symptoms related to the asylum seeking process. The minors who had been in the process of asylum seeking for over a year had a marked increased risk for mental health distress (Nielsen et.al 2008).

### 5.3.8 Traumatic experiences

The strongest evidence for causative factors for psychological disorders emerged as being traumatic experiences. Most common trauma events experienced by the participants were: 1) Experienced the death of a loved one range 82%-56% (Derluyn et.al 2007, Derluyn et.al 2008 Vervliet et.al 2013, Jakobsen et.al 2014), 2) Experienced war, combat situation or armed conflict such as firing or shelling range 79%-50% (Derluyn et.al 2008, Elklit et.al 2012, Sanches-Cao 2012, Vervliet et.al 2013, Jakobsen et.al 2014) 3) Experienced feeling "I'm in danger" ranged 85.5%-61% (Derluyn et.al 2008, Betancourt et.al 2012, Vervliet et.al 2013), 4) Experienced drastic changes in family or separated against their own will ranged 73%-44% (Derluyn et.al 2007, Derluyn et.al 2008, Jakobsen et.al 2014), 5) Experienced loss of possessions 76% (Elklit et.al 2012), 6) Saw that someone else was physically mistreated 43% (Derluyn et.al 2007), 7) Experienced or witnessed physical abuse, rape or psychological harassment ranged 82%-20% (Sanches-Cao 2012, Elklit et.al 2012, Jakobsen et.al 2014), 8)Experienced a loss of one or more friends 66% (Elklit et.al 2012).

Exposure to traumatic events was found strongly associated with mental health distress of refugee minors (Bean et.al 2006, Derluyn & Broekaert 2007, Goosen et.al 2013, Bronstein et.al 2012, Vervliet et.al 2013, Derluyn et.al 2007, Jakobsen et.al 2014, Elklit et.al 2012, Ziaian et.al 2011, Derluyn et.al 2008). Especially vulnerable group was found to be unaccompanied refugee minors. UAMs experienced more traumatic events than their accompanied peers and thus were a bigger risk group for mental health problems (Derluyn & Broekaert 2007). The number of pre-flight traumatic events and exposure to war was a significant predictor for all scales of mental health problems such as PTSD, emotional distress such as anxiety and depression as well as conduct problems such as avoidance, and hyperarousal (Bean et.al 2006, Derluyn & Broekaert 2007, Goosen et.al 2013, Bronstein et.al 2012, Vervliet et.al 2013, Derluyn et.al 2007, Elklit et.al 2012, Ziaian et.al 2011, Derluyn et.al 2008).

The mean number of traumatic events experienced per child study were 6.2 (Bean et.al 2006), 6.6 (Bronstein et.al 2012), 7.5 (Vervliet et.al 2013) and 7 (Derluyn et.al 2008). The average number of traumatic experiences per child per

study were 17 (Elklit et.al 2012), 6.2 (Jakobsen et.al 2014) and 3.6 (Derluyn et.al 2007).

96% - 98% of refugee children and adolescents had experienced at least one war related traumatic event (Jakobsen et.al 2014, Elklit et.al 2012). Derluyn & Broekaert (2007) suggested that girls experienced more traumatic events than boys, mainly sexual abuse and forced marriage. Refugees told that many of their worst experiences happened while imprisoned in the transit countries such as Greece, Lebanon and Italy (Jakobsen et.al 2014).

# 6 RELIABILITY AND LIMITATIONS

13 of the 15 studies were cross-sectional and two were longitudinal. Longitudinal method is considered more reliable research method, because it revisits the participants after a time period. The research selection therefore is a limitation that affects the reliability of this Bachelor Thesis. Another limitation can be found in the language, the author only being able to review articles in English and Finnish.

The chosen topic appears to be quite new, especially in Nordic countries. Some research articles that would have been suitable for this literature review are currently waiting for publication and therefore were not accessible for this literature review. While 15 applicable original studies were found for this review, it is not large enough sample to be able to generalise the results.

The studies were published in these journals: National Institute of Health Public Access, Social Science & Medicine IF 2.89, Ethnicity & Health IF 1.667, European Child and Adolescent Psychiatry IF 3.336 (n=3), Australian Psychologist IF 0.753, International Journal of Epidemiology IF 9.176, Children and Youth Services Review IF 1.105, BMC Public Health IF 2.264, Journal of Adolescent Health IF 3.612, SpringerPlus Open Access IF: to receive first in 2016, Clinical Practice & Epidemiology in Mental Health, Child: care, health and development (John Wiley & Sons Ltd) IF 1.692, Torture Journal. Impact factor means an index of how often the journal's articles are cited in publications and it can be called "a reasonable indicator of quality for general medical journals" (Saha et.al 2003). 3 of the journals do not have an impact factor, and the rest vary between 0.753 for the Australian journal that published the study Emotional and Behavioural Problems Among Refugee Children and Adolescents Living in South Australia by Ziaian et.al (2011) and 9.176 which published the study Frequent relocations between asylum-seeker centers associated with mental distress in asylum-seeking children: a longitudinal medical record study by Goosen et.al (2013). This particular study had also the largest sample (n=8047).

Turku University of Applied Sciences has not acquired licensed all possible databases, therefore it is not known what articles are missed by not having an access on all relevant nursing databases.

The articles for this literature review have been critically appraised and the results of the appraisal were introduced in the chapter called Results of the quality critiquing.

# 7 DISCUSSION

## 7.1 Critiquing the quality of the articles

The research articles were critiqued in order to find out the usefulness and quality of them. Critical appraisal is “the process of assessing and interpreting evidence by systematically considering its validity, results and relevance” (Parker et.al via Gerrish & Lacey 2007, 108). The huge volume of information available means that the reviewer has to filter out unreliable lower quality studies from a large quantity of articles. Even in the best journals some poor studies may be published. For those reasons the reviewer must judge whether the study is useful or unusable. (Gerrish & Lacey, 109.) The quality of the chosen 15 studies was systematically appraised (table 5) using a framework developed by Caldwell et.al (2005) with some modifications from Holland & Reese (2010). Both of these were designed specifically for quantitative research quality analysis in nursing.

The overall quality of the chosen 15 primary research was good or very good. Each of them presented a clear aim and rationale for the study, gained ethics committee approval, identified key variables, described the sample, used trustworthy data collection methods, and had comprehensive discussion on findings. However, in some areas the studies had shortcomings in terms of quality. 8 studies (53%) did not present well stated conclusions by answering the research aim. 6 studies (40%) did not discuss the generalisability of their findings in the conclusion. Out of 9 studies that did state how generalisable the results are, 7 fully disclosed that their results are not generalisable. The conclusions should also give recommendations for future research, 12 articles (80%) did that.

With regards the results, 6 studies (40%) did not present the results clearly. The data that is presented in the results chapter, should not be raw statistical numbers only, but should be analysed to present values in the way that an average reader stumbling upon the research paper can read and understand them (Marshall 2004.) These 6 studies with unclear results presentation showed a statistical ta-

ble of prevalence but did not verbalise the results in logical way or failed to present them in a percentage format. In particular, the Australian study (Ziaian et.al 2011) estimated prevalence of 11.2%. It is not clearly identifiable where they got that number. That is not to say it is incorrect, but criticism towards making the results more readable so that the reviewer can reliably point out the section where the number is taken from thus gaining trust in the research. Furthermore, that study had a very short literature review, did not inform on the gained consent, did not offer an explicit conclusion and did not make recommendations for practical implications. It is also worth to mention, that this study did not discuss the fact that teacher's reports presented much higher mental health problems than the adolescents own reports (even though this fact is printed on the statistical table), and overall presented different results from all the other studies.

Too small sample size in quantitative research may produce chance results that are not reliable (Lee, 2006). The smallest sample was in the Sanchez-Cao et.al (2012) research, n=71 and the largest sample was in the Goosen et.al (2013), n=8047. Most studies had a sample of 100-300. Sample sizes were adequate.

11 (78%) studies disclosed a response rate of the participants and further 5 (36%) wrote out the reasons for non-participation. 12 (86%) stated the translation process of the survey forms. These are all important markers for non-biased study.

Two of the studies (Bean et.al 2006 and Vervliet et.al 2014) gave their subjects tokens of appreciation worth 7.50 EUR and 15 EUR respectively. These studies were follow-up studies lasting over a year. The gift tokens were given after the last survey and the subjects were not told beforehand that they will receive a prize. It is therefore deemed not to affect the reliability of these articles.

Of the 15 research articles 12 are cross-sectional surveys and 3 longitudinal surveys. Longitudinal surveys are considered higher quality because they measure overall change over time, while cross-sectional are confined to a specific point in time.

The following articles had the highest positive quality score (=most "yes" answers) percentage as per the critiquing table: Vervliet et.al (2014) 94%, Nielsen

et.al (2008) 94%, Derluyn et.al (2007) 89%, Goosen et.al (2014) 89%. These articles were judged to have a low risk for bias and high reliability. Most of the articles had a quality score between 70-80%. The lowest score for quality were: Betancourt et.al (2013) 67%, Thommassen et.al (2012) 67% and Ziaian (2011) 61%. The lower the amount of positive “yes” answers, the higher is the risk for bias.

In conclusion, the author is satisfied with the quality and non-bias scores of these studies, thus all 15 research articles are included in this review.

## 7.2 Discussing the results

Between 14-66% of refugee children and adolescents met the criteria for mental health diagnosis. The main factors affecting the refugee children’s and youth’s mental health negatively are girl gender being unaccompanied refugee minor, living in a large scale asylum seeking centre, frequent relocations between asylum centres, uncertain asylum seeking status, and perhaps most importantly, both the severity and number of traumatic experiences.

For those studies where both self-reports and teacher or social worker or parent surveys were used, there is an inconsistency as to which ones yielded higher percentages for mental health problems. Nielsen et.al (2008) who used self-surveys and teacher surveys, found that the reported risk for mental health problems was higher in the self-reports than in the teacher reports. Ziaian et.al (2011) showed higher problem scores in teacher reports compared with self-reports.

Of those articles that measured risk or prevalence for mental health problems, all but one found the risk/prevalence fairly high or very high. However, one study, the Australian research by Ziain et.al (2011) found the prevalence estimation to be low at 6.7% and mentioned that it is not higher than national peer population. They even go as far as saying that the refugees appear to be doing better than their peers. Some points about this: The study sample is entirely consisting of accompanied refugees. The results of the literature review have shown that unaccompanied refugees fare far worse than their accompanied peers. Also the

study excluded holders of temporary protection visas and explains that holders of temporary visa are at greater risk. They do not divulge what residential status the refugees in their sample did have, but it is assumed from the above that they had stronger status of residence than a temporary visa. In addition, the children and adolescents had migrated to Australia within five years prior to study. While they did not describe in any more detail how long they have stayed in Australia, the above suggests that it is perhaps many years. This may lead to greater contentedness and less mental health problems. Most tellingly, over 50% of the study sample had no direct exposure to trauma. The evidence of this literature review has exposed trauma experiences as one of the strongest contributors for mental health risk. Therefore the fact that over half of the participants in the study had no traumatic experiences, would have contributed less negatively on the mental health score of refugees.

Furthermore, the study by Ziaian et.al (2011) had a few issues with quality. Their prevalence estimation, 6.7%, is not visible anywhere in the study and it is unclear where they got that number from. They explain that they “collapsed the two age groups” on parents reports but this number is not on the table for scores. In the teacher reports, the scores for mental health problems were much higher than in parent reports in the table of results. For ages 4-12 the severe and very severe teacher report number for total difficulties is 25.9%. This is mentioned in the results only in one sentence and the risk percentage is not given in plain percentage, but rather they conclude that “according to teacher reports, just 74.1% of children were in the normal range”. They disclose that a large amount of data was missing from the teachers. Ziaian et.al (2011) noted that their results differ from many other studies. They speculate that the low mental health problem rates in self reports may be due to cultural differences on not reporting mental health distress honestly. It was only the second study outside Europe. The asylum seeking process of Australia is not known to the author of this review and it could be speculated that maybe they simply do things better in Australia.

The gender split in the research samples was 54% boys vs. 46% girls. Three studies had exclusively boy samples, but no studies had just girls as a sample.

The trauma experiences of the boys and girls were found to be largely the same (losing a loved one, living in a war zone, losing possessions, being in danger), but it should be noted that girls face specific dangers such as rape either in the home country, during asylum journey or in the new host country. Because there were no girl-specific studies, these experiences may have been buried under the more common traumatic events reported by both genders. UNHCR (2016) reported that girls face risks of sexual and gender-based violence. Women and girls have reported having to pay for travel documents with sexual acts, or being forced into marriage. CARE organisation concluded that the number of Syrian refugee girls forced into marriage has tripled since the conflict began (ABC news 2015). The amount of female refugees is increasing (UNHCR 2016) and as the results of this literature review showed, girls have more mental health problems than boys.

The results showed that fleeing without parents or a close guardian was a major contributor to psychiatric disorders amongst asylum seeking youth. The unaccompanied minors are more vulnerable to various threatening situations since they lack the support that parents can offer. Many of the UAMs were bereaved and in the worst scenario they have had to witness their parents being killed. Having at least one parent works as a protective factor for mental health.

UAMs were significantly overrepresented in psychiatric care and exhibited more self-harm and suicidal behaviour than non-UAMs (Ramel et.al 2015). This finding was strongly backed up by a recent very large scale research (Hollander et.al 2016) conducted in Sweden. Their sample was 1.3 million Swedish people born after 1984 and 24.000 refugees and the finding was that refugees have three times higher risk of psychosis and schizophrenia than non-refugee population.

An interesting finding emerged from the studies with regards the time spent in the new host country. While it could be speculated that the longer time the refugees have spent in the new country, the less mental health problems they would have. This appeared not to be the case. The results indicate with some degree of certainty, that mental health problems do not decrease over time (Bean et.al 2006,

Vervliet et.al 2013, Derluyn et.al 2007, Elklit et.al 2012, Derluyn et.al 2008). Results point towards the fact that mental health distress that was evident at arrival, remained high at later stage also. The mental health problems continue a long time. It could be contemplated that this means that most of the disorders were accumulated at home country and journey, and not a result of a daily stressors experienced later in the new country. However, it would be naïve to assume so, and perhaps even dangerous to place the responsibility so firmly on the events at home country. Most likely it is an indicator of the chronic nature of these problems, and also shows a low level of mental health service contact amongst refugee youth.

Bronstein et.al (2012) found that the UAM refugee adolescents had greater level of behavioural problems the longer they had spent in UK. They offered two explanations for this: 1) The child settles and gets close to new friends. They may relax as they are now safe and learn patterns of bad behaviour. 2) The increased time spent in the country marks nearing the time of the decision of their asylum seeking status and threat of return to home country. This brings great distress and uncertainty and the situation is out of their control.

One study out of the 15 (Vervliet et.al 2013) concentrated on discovering what daily stressors the refugee minors face in their new lives in the new country. They found that a lot of the daily difficulties increased over time, especially discrimination, which in turn led to increased levels of mental health problems. While the first stages of settling the refugees in the new country revolve around providing immediate safety and a roof above their heads, far more needs to be done in the upcoming months and years.

An interesting point arose from the study by Jakobsen et.al (2014). In it, the refugee minors told that some of their worst experiences took place during their flight in the so-called transit countries.

One important finding was that those living in small scale units had less mental health issues than those living in large asylum centres. Also frequent transfers

between asylum centres were detrimental to mental health. While recommendations in this area are beyond the nursing field, it should be noted that protocols avoiding unnecessary transfers should be in place and children and adolescents should be placed in small units. Multiple studies showed how a long lasting residential “stand by” position was harmful to refugee children’s’ mental health.

The strongest evidence of all the factors contributing to the mental health problems was in the area of traumatic experiences. Both the number of trauma events, which was approximately six per refugee child, and the severity of the experienced play a key role. Because the evidence is so strong linking traumatic experiences to mental health distress, and given that the war in Syria has entered its 6th year, the EU member states must consider creating safe ways for travel, and issuing humanitarian visas for refugees, thus minimising the exposure to on-journey suffering.

Currently in Finland there are new job opportunities for instructors, nurses, social workers, and other health care professionals and youth workers in the living groups for young asylum seekers. Finland should train specific professionals in the health care field to evaluate and treat torture victims and educate nurses who work with refugees on PTSD recognition and interventions. In Sweden for example, some hospitals have The Unit for War and Torture Victims and they have initiated a training program for staff who work with UAMs (Ramel et.al 2015). PTSD lasting longer than three months is considered chronic, and can bring comorbidity such as substance abuse and suicidal ideation in its tail. Multi-disciplinary staff that are ideally specifically trained in addition to their formal education, and have wide language skills would be beneficial to care for the mental and physical needs of these children who have faced situations we find hard to even imagine. As pointed out by Sanches-Cao et.al (2012), refugee children may not complain about PTSD or other mental health syndromes. Language barrier may be a factor, as well as prejudice and stigma of mental health issues. They may be afraid of consequences of sharing their feelings, because in their home country talking about mental problems is a taboo. Furthermore they may not wish to talk about their traumatic experiences since their residency status is unclear and

they are afraid to speak out, fearing deportation. This is demonstrated in the finding where only 17% of UAMs were in contact with mental health services, while the level of PTSD was 66% (Sanches-Cao et.al 2012). Having a mental service contact is vital, especially since the findings have shown that the problems seem to persist even for decades, possibly even trickling down to the second generation of refugee settlers.

While many refugee children and teenagers seem to have mental health problems, it is important to remember that most do not and note the remarkable resilience of these people.

# 8 CONCLUSION

This literature review aimed at describing the findings of 15 primary studies, giving a summary of most common mental health problems of refugee children and adolescents, the prevalence of them and the factors contributing to them.

Based on this review, the author concludes that the most common mental health problems of child or adolescent refugees are post traumatic stress disorder (31% -66%), depression (16% - 50%) and anxiety (14% - 45%). The factors contributing to the mental health problems are girl gender, being unaccompanied refugee minor, mother's PTSD, number and severity of traumatic events, frequent transfers between asylum centres, living in a large scale asylum centre, uncertain residential status, experiences during flight and in transit countries and daily stressors such as discrimination.

New studies focusing to girls only is vital. The specific suffering experienced by girls should be highlighted in further research and furthermore, surveys aimed specifically at sexual or gender based violence should be developed. Also further research should concentrate exclusively on the situations they face during the flight and how those experiences affect mental health.

Further research should concentrate on daily stressors in the new host country. How does being worried about school, money and the future affect the mental health of refugee children? One specific area of investigation should be discrimination because that emerged as the most important daily stressor. It needs to be understood that the mental health problems are not just related to the living conditions in the war-zone, but that the refugee youth are facing a new variety of worries after arriving to relative safety. Fast admission to school and education acts as a protective barrier against mental health problems.

Pro-active screening processes should be implemented upon the arrival of the refugee minor, with frequent follow-up in the upcoming months and years. Early detection and intervention are crucial in trying to prevent a lifelong mental health illness and helps assimilating the refugees in to the new society.

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# APPENDIX

TURUN AMMATTIKORKEAKOULU
TURKU UNIVERSITY OF APPLIED SCIENCES

**THESIS COMMISSION AGREEMENT** 1

**PERSONAL INFORMATION OF THE STUDENT**

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**THESIS**

| | |
|---|---|
| Topic / working title | Mental health problems of child and adolescent refugees and asylum seekers |
| Due date | 25.5.2016 |

**EMPLOYER**

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TURUN AMMATTIKORKEAKOULU
TURKU UNIVERSITY OF APPLIED SCIENCES

# THESIS COMMISSION AGREEMENT



## TERMS OF AGREEMENT FOR A COMMISSIONED THESIS

### SUPERVISION AND RESPONSIBILITIES

The student is responsible for the completion and the results of the thesis. Turku University of Applied Sciences is responsible for the supervision of the thesis process. The employer agrees to supply the student with all the information and material needed in the thesis work, and to advise the student from the point of view of the employer organization.

### RIGHTS

The copyright of the thesis remains with the author, that is, the student. In addition to copyright, valid legislation concerning other immaterial rights shall be obeyed.

### EMPLOYMENT RELATIONSHIP AND EXPENSES

The employer and the thesis worker shall agree separately on the possible employment relationship, compensation paid for the work and reimbursement of expenses possibly caused by the thesis process.

### PUBLICIZING THE RESULTS AND CONFIDENTIALITY

A written report on the thesis process shall be prepared in accordance with the instructions of Turku University of Applied Sciences.

Copies of the written report shall be delivered to the employer and submitted to the collections of the library, or published in an electronic form in the electronic library.

The thesis report to be published must be prepared so that it contains no professional or business secrets or other information deemed confidential in the Finnish Act on the Openness of Government Activities (621/1999); instead, they shall be left as the background material for the thesis. In the assessment of the thesis, both the published and the confidential part shall be considered.

The employer and the student agree not to disclose to a third party any confidential information or documents revealed during the thesis process, or in negotiations held before or after the process. A representative of the employer organization shall be given a possibility to read the thesis report not later than fourteen (14) days prior to its intended publishing date. The employer shall, prior to the publishing date mentioned above, state which confidential sections should not be published.

| Which confidential professional or business materials will not be published? | |
|---|---|

## WE HAVE MUTUALLY AGREED ON THE COMPLETION OF THE THESIS PROCESS AS DESCRIBED ABOVE

11 / 3 20 16 — Student MARI HONKANEN

16 / 3 20 16 — Employer

**APPENDIX: THESIS PLAN** ☒

Print

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# TABLES

**Table 1.** *PICO table on literature search.*

| Database | Search terms and limiters | Result | Further limiters | Result | Selected by the title | Selected by the abstract | Selected by the full text |
|---|---|---|---|---|---|---|---|
| **CINAHL** | asylum seek* or refuge* or unaccompa* or un-accompa* or separated refugee* or displaced refugee*<br><br>AND<br><br>mental health or mental illness or mental proble* or mental disord*or psychological disorder or psychological illness or psychiatric illness or post-traumatic stress disorder or post traumatic stress disorder or posttraumatic stress disorder or PTSD or war trauma or war related trauma or war-related trauma or war-trauma<br><br>AND<br><br>child* or adoles* or minor* or under-18 or under 18 or underage* or young or teenager or youth | 469 | Full text and 2000-current | 122 | 58 → after removing duplicates 57 | 10 | 6 |
| **CINAHL** | Same search as above but without the truncation | 338 | Full text and 2000-current | 83 | After removing duplicates from the truncated search: 12 | 0 | 0 |
| **CINAHL** | Asylum-seeking | 116 | Full text and 2000-current | 48 | 1 | 0 | 0 |
| **CINAHL** | migrant adolesc* or migrant child* | 321 | Full text and 2000-current | 83 | 2 | 1 | 1 |
| **CINAHL** | Refugee AND psychological AND unaccompanied | 26 | Full text and 2000-current | 10 | 4 | 0 | 0 |
| **Cochrane** | Refugee | 142 | | 4 | 4 | 0 | 0 |
| **Medline (Ovid)** | Refuge* AND mental* (database was not able to handle multiple words in the search field) | 7568 | Full text and 2000-2016 | 989 | 4 | 0 | 0 |
| **Science Direct (Elsevier)** | asylum seek* or refuge* or unaccompa* or un-accompa* or separated refugee* or displaced refugee*<br>AND<br>mental health or mental illness or mental proble* or mental disord*<br>(Database is not able to add more search words in the field. Additionally, there is only two fields separated by AND) | 296 | Limiters were automatically applied by the database as 1999-today and full text | 296 | 27→ after removing duplicates 25 | 3 | 2 |
| **Science Direct (Elsevier)** | Refugee AND unaccompanied | 187 | Limiters were automatically applied by the database as 1999-today and full text | 187 | 7→ after removing duplicates 4 | 1 | 1 |
| **Science Direct (Elsevier)** | Refugee AND child | 7220 | Limiters were automatically applied by the database as 1999-today and full text | 7220 | 6 | 1 | 0 |
| **PubMed** | refug* OR asylum* OR migrant AND mental health* OR mental disor* OR mental illn* OR mental probl* OR psychiatr* AND child* OR adolesc* OR youth OR minor* | 310 | Free full text, 10 years, humans | 202 | 8 | 3 | 3 |
| **Additional references (manual search)** | Refugee AND mental health | | | | 21 | 6 | 2 |

**Table 2.** *Demographics of participants.*

| Total participants, refugees (n=13.163) | |
|---|---|
| Boys/Girls | 7129/6034 |
| | (54%/46%) |
| Age | |
| 0-11 years | 6859 (52%) |
| 12-18 years | 6123 (46.5%) |
| >18 | 181 (1.5%) |
| UAM/non-UAM | 2251/10.912 |
| | 17%/83% |
| Continent of origin | |
| **Asia** | **4435 (34%)** |
| Afghanistan | 2212 (50%) |
| Iraq | 1118 (25%) |
| **Europe** | **2861 (22%)** |
| former USSR states | 1417 (51%) |
| former Yugoslavia states | 1272 (44%) |
| **Africa** | **2128 (16%)** |
| Angola | 936 (44%) |
| **South America** | 58 (0.44%) |
| **Not known** (may contain the above mentioned countries) | **3681 (28%)** |
| Length of stay <12 mo/>12mo (not known 1025, 8%) | 1925/10213 |
| | (15%/77%) |
| Living currently | |
| Asylum center, small or large scale | 9430 (72%) |
| In a house with family members | 981 (7.3%) |
| Semi-independent living groups | 576 (4.3%) |
| Foster care | 246 (1.9%) |
| Tents, abandoned buildings | 183 (1.3%) |
| Boarding schools | 119 (0.9%) |
| Alone | 82 (0.6%) |
| Other (with friends, B&B etc.) | 33 (0.2%) |
| Not reported | 1513 (11.5%) |

**Table 3.** *Initial literature comparison.*

| The title | The place and year | The researchers | The purpose of the study | The sample | Method | The main findings |
|---|---|---|---|---|---|---|
| Course and predictors of mental health of unaccompanied refugee minors in the Netherlands: One year follow-up | The Netherlands, 2006 | Bean, T; Eurelings-Bontekoe, E; Spinhove, P | To enlarge the knowledge of mental health among refugee adolescents | 4000 randomly selected from the total of 12.000. Ages 11 to 17.5 years. Final sample: 920 unaccompanied refugee minors from 48 countries | Quantitative survey. 5 self-report questionnaires: The Hopkins Symptoms Checklist-37 for Adolescents (HSCL-37), The Stressful Life Events Checklist (SLE), The Reactions of Adolescents to Traumatic Stress (RATS), The Child Behavioral Checklist Guardian Report (CBCL), Teacher's Report Form (TRF) | Psychological distress of refugee minors was severe (50%) and chronic.<br><br>Experienced adverse life events were strongly related to the severity of psychological distress. |
| Different perspectives on emotional and behavioural problems in unaccompanied refugee children and adolescents | Belgium, 2007 | Derluyn, I; Broekaert, E | 1)To investigate the prevalence of emotional and behavioural problems in unaccompanied refugee children and adolescents living in Belgium<br>2) Perspectives of mental health of adolescents, comparing with social workers perspecitves | 166 unaccompanied refugee children from Africa, Asia, Eastern Europe and South America | Quantitative survey. Self-report questionnaires: The Hopkins Symptoms Checklist-37 for Adolescents (HSCL-37), Strengths and Difficulties Questionnaire (SDQ-self), Stressful Life Events (SLE), Reactions of Adolescents to Traumatic Stress questionnaire (RATS). For social worker or foster parent: Child Behavior Checklist (CBCL/6-18), trengths and Difficulties Questionnaires *parent version (SDQ-parent) | From 37% to 47% of the unaccompanied refugee youths have severe or very severe symptoms of anxiety, depression and post-traumatic stress. |
| Frequent relocations between asylum-seeker centres are associated with mental distress in asylum-seeking children: a longitudinal medical record study | The Netherlands, 2013 | Goosen, S; Stronks, K; Kunst, A | To assess: (i) whether relocations during the asylum process are associated with mental distress in asylum-seeking children; and (ii) whether this association is stronger among vulnerable children. | 8047 children aged 4-17 mostly from Afghanistan and former Soviet countries. Unaccompanied minor asylum seekers were excluded | International Classification of Primary Care codes | A high annual relocation rate (41 relocation/year) was associated with increased incidence of mental distress.<br><br>Note: Study concerns only prevalence of mental illness in refugee children who had to relocate during asylum seeking process |
| Emotional and behavioural problems amongst Afghan unaccompanied asylum-seeking children: results from a large-scale cross-sectional study | UK, 2012 | Bronstein, I; Montgomery, P; Ott, E | To present results from the largest Afghan UASC mental health survey in the UK. To estimate the prevalence of emotional and behavioural problems and to investigate the associations of these problems | 222 Afghan unaccompanied asylum-seeking children | Quantitative survey. Self-report questionnaires: The Hopkins Symptoms Checklist-37 for Adolescents (HSCL-37), Stressful Life Events (SLE) | 31.4 % scored above cut-offs for emotional and behavioural problems, 34.6 %for anxiety and 23.4 %for depression |

| | | | | | | |
|---|---|---|---|---|---|---|
| Emotional and Behavioural Problems Among Refugee Children and Adolescents Living in South Australia | Adelaide, Australia, 2011 | Ziaian, T; Anstiss, H; Antoniou G; Baghurst, P; Sawyer, M | To present the prevalence of emotional and behavioural problems and patterns of service utilisation among refugee children and adolescents.<br>And:<br>Patterns of service utilisation | 530 refugee children aged 4-17 from Middle East, Sudan, Liberia and the former Republics of Yugoslavia living in South Australia | Quantitative survey.<br>Strengths and Difficulties Questionnaire (SDQ)<br>For service utilization: Child and Adolescent Component of the National Survey of Mental Health and Wellbeing | The low (6.7%) prevalence for abnormal emotional and behavioural problems reported in this study is much lower for refugee children and adolescents living in other countries.<br><br>11.0% of children and adolescents found to have borderline or abnormal emotional and behavioural problems, only 13.0% accessed professional help |
| Emotional and behavioural problems in migrant adolescents in Belgium<br><br>*note: this study refers to "migrants" but means "refugees" | Belgium, 2007 | Derluyn, I; Broekaert, E; Schuyten, G | To investigate the prevalence of emotional and behavioural problems in recently arrived migrant adolescents in Belgium, compared to Belgian peers. | 1249 migrant adolescents from 93 countries and 602 Belgian adolescents | Quantitative survey.<br>The Hopkins Symptoms Checklist-37 for Adolescents (HSCL-37), Strengths and Difficulties Questionnaire (SDQ), Stressful Life Events (SLE), Reactions of Adolescents to Traumatic Stress questionnaire (RATS) | Little differences in the prevalence of emotional and behavioural problems between migrant and non-migrant adolescents. 23.4% of the migrant adolescents and 23.3% of their Belgian peers have severe or very severe symptoms of anxiety. For depression, 19.3% and 16.3% |
| Internalizing and externalizing symptoms among unaccompanied refugee and Italian adolescents | Italy, 2012 | Thommessen, S; Laghi, F; Cerrone, C; Baiocco, R; Todd, B | To investigate the prevalence of emotional and behavioral symptoms in unaccompanied refugee adolescents living in Italy compared to Italian peers | 60 male unaccompanied refugee adolescents from Guinea-Bissau, Afganistan and Bangladesh, mean age 17.17 and 60 male native Italian adolescents | Quantitative survey.<br>The Child Behavioral Checklist (CBCL/6-18) | High levels of emotional and behavioral problems in unaccompanied refugee youth living in Italy.<br><br>81.5% of the unaccompanied refugees, showed both internalizing and externalizing problems, compared to 18.5% of the Italian adolescents |
| Longitudinal follow-up of the mental health of unaccompanied refugee minors | Belgium, 2013 | Vervliet, M; Lammertyn, J; Broekaert, E; Derluyn, I | To close the knowledge gap regarding he development of unaccompanied refugee minor's mental health during in the host country and the role of traumatic experiences | 103 unaccompanied refugee minors from Aftanistan, Guinea, Congo, Somalia, Morocco, mean age 16. | Quantitative survey.<br>The Hopkins Symptoms Checklist-37 for Adolescents (HSCL-37), Stressful Life Events (SLE), Reactions of Adolescents to Traumatic Stress questionnaire (RATS), Daily Stressors Scale for Young Refugees (DSSYR) | High average number of traumatic experiences<br><br>High scores for anxiety 26%, depression 33% and PTSD 48% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Mental Health Problems in Separated Refugee Adolescents | Belgium, 2008 | Derluyn, I; Mels, C; Educ, M; Broekaert, E | To investigate mental health problems in refugee adolescents *separated* from their parents compared to their *accompanied* peers | 1294, aged 11-18, from Africa, Asia, Eastern Europe and South America | Quantitative survey.<br>The Hopkins Symptoms Checklist-37 for Adolescents (HSCL-37A), Stressful Life Events (SLE), Reactions of Adolescents to Traumatic Stress questionnaire (RATS) | Refugee adolescents separated from both parents experienced the highest number of traumatic events compared to accompanied refugee adolescents<br>Anxiety: 20% vs 8.7%, depression 30.2% vs 8.1%, PTSD 36.7% vs 5.7% |
| Overrepresentation of unaccompanied refugee minors in inpatient psychiatric care | Sweden, 2015 | Ramel, B; Täljemark, J; Lindgren, A; Johansson, B.A | To compare inpatient psychiatric care between unaccompanied refugee minors and non-unaccompanied refugee minors i.e accompanied refugee minors | 56 unaccompanied refugee minors and 205 accompanied minors, aged 12-17, mostly from Afghanistan | Quantitative code system<br>Using specific code given to each patient and questionnaire to 48 physicians | 3.40% of the unaccompanied refugee minors received inpatient care compared to 0.26% of the accompanied refugee minor population.<br>86% of unaccompanied refugee minors were admitted with symptoms relating to stress in the asylum process. |
| Prevalence of psychiatric disorders among unaccompanied asylum-seeking adolescents in Norway | Norway, 2014 | Jakobsen, M; Demott, M; Heir, T | To explore the prevalence of psychiatric morbidity at an early stage after arrival to the host country by unaccompanied asylum-seeking children | 160 unaccompanied asylum-seeking children, aged 15-18 from Afghanistan, Somalia, Iran | Structured clinical interview and Quantitative survey<br>Hopkins Symptom Checklist-25 (HSCL-25), Harvard Trauma Questionnaire (HTQ), Stressful Life Events (SLE) | PTSD (6%), MDD (4%), Agoraphobia (4%) and GAD (8%) |
| Psychological distress and mental health service contact of unaccompanied asylum-seeking children | UK, 2012 | Sanchez-Cao, E; Kramer, T; Hodes, M | To describe the level of psychological distress among unaccompanied asylum-seeking children and the pattern of mental health service utilizing | 71 unaccompanied asylum-seeking children aged 13-18 from Africa, Kosovo and Middle East | Quantitative survey.<br>Harvard Trauma Questionnaire (HTQ), Impact of Event Scale (IES), Birleson Depression Self-Rating Scale for Children (DSRSC), Strengths and Difficulties Questionnaire (SDQ), Attitudes to Health and Services Questionnaire (AHSQ) | 66.2% were at high risk for post-traumatic stress disorder and 12.7% at high risk for depressive disorder. Only 17% had mental health service contact. |
| Social support, coping and posttraumatic stress symptoms in young refugees | Denmark, 2012 | Elklit, A; Østergård Kiær, C; Lasgaard, M; Palic, S | To explore the association between PTSD, and various contributing factors number of factors and coping strategies in adolescent refugees in refugee settlements | 119 Bosnian youths, aged 17-20. Most accompanied (83%) | Quantitative survey.<br>Harvard Trauma Questionnaire (HTQ), The Coping Style Questionnaire (CSQ), Crisis Support Scale (CSS) | 98% had direct exposure to at least one traumatic war event.<br><br>43% of the participants met the criteria for a PTSD diagnosis |

| | | | | | | |
|---|---|---|---|---|---|---|
| Connectedness, social support and internalising emotional and behavioural problems in adolescents displaced by the Chechen conflict | USA, 2013 | Betancourt, T; Salhl, C; Buka, S; Leaning, J; Dunn, G; Earls, F | To investigate factors associated with internalising emotional and behavioural problems among adolescents displaced during the most recent Chechen conflict. | 183 Chechen youth, aged 10-17 | Quantitative survey. The Youth Self Report Tool | Girls to report higher average internalising scores. Average score of 13.7 for boys and 18.7 for girls |
| Mental health among children seeking asylum in Denmark - the effect of length of stay and number of relocations: a cross-sectional study | Denmark, 2008 | Nielsen, S; Norredam, M; Christiansen, K; Obel, C; Hilden, J; Krasnik, A | To examine the mental health of children seeking asylum in relation to organisational factors of the asylum system including length of stay and number of relocations. | 260 accompanied children, aged 4-16 | Quantitative survey. Strengths and Difficulties Questionnaire (SDQ) | An increased risk of having mental difficulties |

**Table 4.** *Content analysis and coding.*

| Author, year of publication | Name of the research article | Codes: main findings & discussion |
|---|---|---|
| Bean et.al, 2006 (1) | Course and predictors of mental health of unaccompanied refugee minors in the Netherlands: One year follow-up | • Follow up study: T1 first assessment after refugee had been living in Netherlands for about 4months<br>• T2 second assessment at 12 months after first T1<br>• 30.5% had been transferred at least one time to another refugee center by T2 (1)<br>• At T2 41% had received a temporary residential status (6)<br>• Mean number of traumatic events: 6.2 (7)<br>• Mental health problem prevalence for both internalising symptoms (=anxiety and depression) and PTSD found to be SEVERE 50%, and at T2 follow up 46.2% (8)<br>• Mental health problems NOT related in following variables: length of stay in Netherlands, change in guardian, change in school (4, 5, 10)<br>• Mental health problems SIGNIFICANTLY associated with internalising and PTSD scores in gender, temporary resident permit, having a family member in Netherlands, being transferred to another refugee center (1, 4, 6)<br>• Between T2 (6 months) and T3 (18 months), many stressors arose: the impact of age assessment (6) → The number of daily stressors had SIGNIFICANT impact on mental health problem score (6)<br>• Girls reported SLIGHTLY higher scores on internalising, and PTSD (9)<br>• Older age SIGNIFICANTLY related with higher internalising & externalising problems & PTSD (11)<br>• Minors transferred to another refugee center reported SLIGHTLY higher scores on internalising problems (1)<br>• Minors having a family member in Netherlands had lower scores on internalising, i.e had a better mental health status (4)<br>• Minors who had not obtained temporary residential status had higher internalising problems (6)<br>• Minors who received mental health care had SIGNIFICANTLY lower internalising problems (12)<br>• Minors who lived in large refugee centers vs. other types of smaller residential settings had SIGNIFICANTLY higher internalising and PTSD problem scores (1)<br>• ALL minors at T1 reported elevated internalising & PTSD scores in comparison to Dutch peers (2)<br>• CONTINUOUSLY (T1 to T2) high severity level of PTSD indicate chronic nature (10)<br>• Baseline level of mental health problems at T1 was the highest indicator at T2 high levels (10)<br>• Traumatisation strongly associated with high levels of psychological stress (7)<br>• Number of traumatic events is a SIGNIFICANT predictor PTSD reactions, emotional distress and behavioural problems at follow-up at T2 (7)<br>• No indication of severity levels of anxiety/depression lowering over time (10) |
| Derluyn & Broekaert, 2007 (2) | Different perspectives on emotional and behavioural problems in unaccompanied refugee children and adolescents | • Prevalence of internalising problems is very high, 37% for anxiety, 47% for depression and 44% for PTSD including both severe (borderline) and very severe (clinical) (8)<br>• Girls have higher internalising scores, intrusion symptoms (PTSD), withdrawn syndrome (9)<br>• Age has no influence on mental health problems (11)<br>• UAMs experience more traumatic events than non-UAMs and are therefore a risk group for mental health problems (4)<br>• Separation from parents is an important risk factor for mental health problems (4)<br>• Number of traumatic events is a SIGNIFICANT influence on anxiety, depression, PTSD, avoidance, hyperarousal, conduct problems (7) |

| | | |
|---|---|---|
| | | • Place of residence has SIGNIFICANT influence on depression scores, lowest scores for minors living alone (1)<br>• Possibility that the girls have experienced other or even more difficult migration trajectories compared to boys, with possibly more traumatising events, such as sexual abuse or forced marriage (7)<br>• Time minors have lived in Belgium had SIGNIFICANT influence only on intrusion symptoms, with lowest scores for those living more than 2 years in Belgium (10)<br>• Externalising symptoms less likely than internalising symptoms (8)<br>• In the refugee centres in the host countries, (unaccompanied) refugee girls might be more at risk for experiencing certain traumatising events, for example, rape or forced prostitution (9)<br>• 17- and 18-year-old unaccompanied refugee adolescents have more depressive symptoms (2) → fear of losing permits to stay (11) |
| Goosen et.al, 2013 (3) | Frequent relocations between asylum-seeker centres are associated with mental distress in asylum-seeking children: a longitudinal medical record study | • 40% of minors had undergone 3 or more relocations. Most had undergone at least 1 (1)<br>• 13% minors had one or more mental health problems in the first 6 months (8)<br>• 26% of minors had at least 1 mental health problem (8)<br>• 14% of child's mother had a diagnosis for PTSD or depression (4)<br>• Mother with diagnosed PTSD/depression seemed to have increased risk for mental health problem (4)<br>• The risk for mental health problem was higher for boys aged 4-11 and for girls aged 12-17 (9, 11)<br>• Increased length of stay in asylum center increased the risk for mental health problem in all (1)<br>• For minors with annual relocation rate of more than 1/year, the risk for newly recorded mental health problem was 2.7 x higher than for children with low annual relocation rate (1)<br>• In addition to frequent relocation, minors who had been exposed to violence, or had mother with diagnosed PTSD/depression seemed to have increased risk for mental health problem (4, 7)<br>• Newly recorded risk for mental health distress decreases over time (10) |
| Bronstein et.al, 2012 (4) | Emotional and behavioural problems amongst Afghan unaccompanied asylum-seeking children: results from a large-scale cross-sectional study | • The mean number of stressful life events pre-flight was 6.6 per child (7)<br>• 31% of minors scored high or very high for emotional and behavioural problems<br>35% anxiety, 23% depression (8)<br>• SIGNIFICANT associations with pre-flight trauma events with the higher problem scores for both emotional and behavioural problems (7)<br>• Minors living in foster care had SIGNIFICANTLY lower scores on anxiety, depression and behavioural problems (1)<br>• SIGNIFICANT correlation in time in the UK and externalising (=conduct/behavioural) score; longer in UK, the greater the behavioural problems → perhaps due to peer effect or seeking control in an uncontrollable situation (10)<br>• Important: While over 30% of minors had mental health problems, the majority did not. |
| Ramel, et.al 2015 (5) | Overrepresentation of unaccompanied refugee minors in inpatient psychiatric care | • In the catchment area, 3.4% of UAMs received inpatient psychiatric care, and 0.67% involuntary inpatient care (compared to 0.26% and 0.02% of the non-UAM population) (8)<br>• Doctor estimation: 76% of admitted UAMs and 58% of non-UAMs exhibited self harm or suicidal behaviour (8)<br>• 86% of UAMs had symptoms related to stress in the asylum process (6)<br>• As inpatients, UAMs presented 21% of all patients in first treatment and 39% of all patients in involuntary care (4)<br>• Main finding: UAMs were MARKEDLY overrepresented in both voluntary and involuntary inpatient psychiatric care (4) |

| | | |
|---|---|---|
| | | • Contributing factors: The mental health problem morbidity along with higher rate of self-harm, insecure asylum status, lack of outpatient mental health services adjusted to the UAM population (6, 12) |
| Vervliet et.al, 2013 (6) | Longitudinal follow-up of the mental health of unaccompanied refugee minors | • Mean number of traumatic experiences is 7.5. Most common: Experienced the death of a loved one 82%, experienced war or armed conflict 79%, experienced "I'm in danger" 85.5% (7)<br>• The number of daily stressors increased over time, especially discrimination, difficulties in peer and adult relationships, worries about residency, insufficient food, clothing and money, uncertainty about future (1, 3)<br>• Between T2 (6 months) and T3 (18 months), many stressors arose: dissatisfied with the educational situation, missing family, the impact of age assessment, being homeless, being forcibly and repeatedly moved (1, 4, 5<br>• Minors had high scores for anxiety (26%), depression (33%), PTSD (48%) and internalising problems (8)<br>• Time had no significant effect on mental health, overall remains quite high (10)<br>• Time in the host country does not significantly influence mental health (10)<br>• The number of daily stressors had SIGNIFICANT impact on mental health problem score (3)<br>• The number of traumatic experiences impacted mental health negatively, except depression (7)<br>• Girls reported SIGNIFICANTLY more symptoms for PTSD than boys (9)<br>• Findings indicate that mental health problems persist a long time (10)<br>• Findings indicate strongly that both traumatic experiences and daily stressors have a large impact on mental health (3, 7)<br>• Important to recognise that a large group of minors do not develop mental health problems |
| Thommessen et.al, 2012 (7) | Internalizing and externalizing symptoms among unaccompanied refugee and Italian adolescents | • UAMs were more likely to be classified with internalising and externalising problems than native Italian peers. Differences were SIGNIFICANT (2)<br>• 81.5% of the UAMs showed both internalising and externalising problems, compared to 18.5% of the Italian peers (8)<br>• Italian peers were more likely to be classified without problems than UAMs (74% vs 26%) (2) |
| Nielsen et.al, 2008 (8) | Mental health among children seeking asylum in Denmark – the effect of length of stay and number of relocations: a cross-sectional study | • Teacher-reports indicated 35% of minors showed evidence of mental problems (8)<br>• Children's own reports showed 26%, in age group 11-16 50% reported emotional problems (8)<br>• Older children showed more emotional problems, younger children more hyperactivity (11)<br>• SIGNIFICANT difference on teacher reports; boys having overall worse mental health than girls – mainly conduct problems (9)<br>• 11-16 age group, combining teachers and self-reports, 58% showed mental health problems (8)<br>• 11-16 self reports, girls had more emotional problems, boys behavioural problems, but no gender difference overall (9)<br>• Minors who had been asylum seeking over a year had a MARKED increased risk for mental health problems (6)<br>• Children who have stayed in 4 or more different places had increased risk developing mental health problems. Probability for mental health problem is 39% - 65% for 4-13 relocations (1)<br>• Children have NOTABLY worse mental health in comparison with European background (2) |
| Derluyn et.al, 2007 (9) | Emotional and behavioural problems in migrant adolescents in Belgium | • Minors experienced on average 3.6 traumatic events (Experienced a death of a loved one 56%, experienced important changes in family life 44%, saw that someone else was physically mistreated 43%) (7)<br>• Belgian peers have higher scores on anxiety, externalising and hyperactivity scale than refugees (2)<br>• Accompanied boys experienced more traumatic events than girls, but unaccompanied girls experienced more traumatic events than boys (4) |

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| | | • Girls have more anxiety, PTSD, higher avoidance scores and emotional problems on both groups (9)<br>• Boys have more problems in pro-social behaviour (9)<br>• The living situation has a SIGNIFICANT impact on anxiety (4), both parents vs one parent<br>• Number of traumatic events affects all scales SIGNIFICANTLY (7)<br>• UAMs show less conduct problems than accompanied refugees (4)<br>• Refugee risk groups: Number of traumatic experiences, girl gender, being unaccompanied (all scales: anxiety, depression, emotional problems, PTSD) (4, 7, 9<br>• Age have no influence on mental health problems (11)<br>• Little differences in prevalence was found in refugees vs. Belgian peers: anxiety 23.4% refugees, 23.3 Belgian, depression 19.3% refugees, 16.3% Belgian, emotional problems 19% refugee, 17.4% Belgian (2, 8)<br>• For PTSD refugees have SIGNIFICANTLY higher scores, 27% have PTSD (13% Belgian) (2, 8)<br>• Refugees have more peer problems than Belgians (36% vs 19%) (2)<br>• Time in Belgium have no influence on mental health problems, indicating that mental health problems last a long time (10) |
| Sanchez-Cao et.al, 2012 (10) | Psychological distress and mental health service contact of unaccompanied asylum-seeking children | • 62% had witnessed/experienced a combat situation, 20% had witnessed/experience abuse or rape (7)<br>• 11% scored borderline/abnormal range for psychological distress (8)<br>• 66% scored above cut-off for PTSD, 12% scored above cut-off for depression (8)<br>• Depressed rather than PTSD had mental health service contact (12)<br>• High unmet need for mental health service contact → 17% of UAMs had contact with mental health services (12) |
| Betancourt et.al, 2012 (11) | Connectedness, social support and internalising emotional and behavioural problems in adolescents displaced by the Chechen conflict | • 64% of minors reported previous displacement, 87% lived in settlement between 1-2 years (1)<br>• 52% lived in abandoned buildings, 12% in tents and hand-made shelters respectively (1)<br>• Living in a rented home or apartment within a settlement area bwas also correlated with higher reports of community connectedness (1)<br>• 61% reported fear for their safety (7)<br>• 17% had internalising problems (8)<br>• No difference between living with one parent vs. both parents (4)<br>• Age, prior displacement, housing status not significantly correlated with internalising problems (1, 11)<br>• Family connectedness has a protective influence on mental health (4)<br>• Girls reported higher internalising problems (9) |
| Jakobsen et.al, 2014 (12) | Prevalence of psychiatric disorders among unaccompanied asylum-seeking adolescents in Norway | • Surveys took place very shortly after arrival (6)<br>• 96% had experienced at least one traumatic event. Most common: Life threatening events 82%, physical abuse 78%, loss of close relative 78%, drastic changes in family 62% (7)<br>• The average number of traumatic experiences 6.2 (7)<br>• 50% of youth male had war related experiences (7)<br>• 65% lost their father, 22% lost both parents (4)<br>• 42% fulfilled diagnostic criteria for psychiatric disorder (8)<br>• Most common mental health problems 4 months after arrival: PTSD 31%, major depression 9%, dysthymic disorder 4.4%, agoraphobia 4.4% (8)<br>• Many participants told that their worst experience happened while imprisoned in transit countries (such as Lebanon, Greece, Italy) (7)<br>• Findings indicate that mental health problems were present at arrival, and probably not an effect of asylum seeking process (speculation) (10)<br>• Some earlier studies suggest a short period of wellbeing shortly after arrival to host country, |

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| | | findings here indicate that this is not the case. (10) |
| Elklit et.al, 2012 (13) | Social support, coping and posttraumatic stress symptoms in young refugees | • 98% reported direct exposure to at least one war related traumatic event (7)<br>• 17 traumatic events on average per person. Most common: loss of possessions 76%, firing or shelling 75%, psychological harassment 72%, loss of one or more friends 66% (7)<br>• 38% -43% met the criteria for PTSD + 14% subclinical PTSD (=one symptom short of full PTSD) (8)<br>• That is a disturbingly high prevalence, considering they have relatively intact family status (8)<br>• Perhaps explained by stand-by position of asylum seeking process (up to 2.5 years of waiting) (8)<br>• No differences between those with or without PTSD in regard to age, months spent in refugee camps, months spent in asylum centers, or duration in Denmark (1, 10)<br>• Minors with PTSD had witnessed SIGNIFICANTLY more personal traumas than those without (7)<br>• Girls had SIGNIFICANTLY higher prevalence of PTSD (9)<br>• Single direct exposure to trauma or total amount of trauma events were not linked to PTSD in this study (7)<br>• That indicates that the minors were more concerned with coping with the present situation, than past trauma (7)<br>• No difference in PTSD/no-PTSD with age (11) |
| Ziaian et.al, 2011 (14) | Emotional and Behavioural Problems Among Refugee Children and Adolescents Living in South Australia | • Parent reports: 5% of children and 10% of adolescents had emotional and behavioural problems (not including borderline cases which add 5% and 4%) (8)<br>• Parent reports: peer problems were the most prevalent for both age groups and hyperactivity the least and 4-12 age group they gave low scores for conduct problems (8)<br>• Self reports of adolescents: 90% scored normal (8)<br>• Teacher reports: 23% emotional and behavioural problems + 11% borderline for adolescents and 18.5% + 7% for children (8)<br>• Summary: 11% of all participants had borderline or abnormal mental health problems (8)<br>• 6.7% prevalence estimation for mental health problems. Most seem to be coping well. (8)<br>• These are LOWER scores than expected in any given community population (8)<br>• For adolescents, girls had better pro-social scores. (9)<br>• Children with separated parents scored higher for emotional and behavioural problems (4)<br>• Prosocial scores were better, the longer time spent in Australia (10)<br>• Exposure to trauma yielded SIGNIFICANTLY higher problem scores (7)<br>• For adolescents, also correlation between **number** of trauma events and higher problem scores (7)<br>• Of those with borderline or abnormal mental health problems, only 13% accessed mental health services (12) |
| Derluyn et.al, 2008 (15) | Mental Health Problems in Separated Refugee Adolescents | • High number of trauma events experienced. Most common: experienced a death of a loved one 80%, experienced war or armed conflict 74%, separated from their family against their will 73%, experienced important changes in family within one year 72%, experienced feeling "I'm in danger" 72% (7)<br>• Mean trauma events: 7 (7)<br>• UAM girls experienced more traumatic events than boys (9)<br>• Minors fleeing without parents had the highest number of trauma events (4)<br>• But also those living with just mother had SIGNIFICANTLY more trauma events than those living with both parents (4)<br>• Girls develop more anxiety and depression problems (9) |

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| | | • Age does not influence mental health problems (11)<br>• Separated from both parents yield SIGNIFICANTLY higher depression, anxiety, PTSD scores (4)<br>• Number of trauma events SIGNIFICANTLY predict mental health problems on all scales (7)<br>• Prevalence for UAMs: Anxiety borderline 25%, clinical 20%, depression borderline 16%, clinical 30%, PTSD total score 51% (clinical 37%) (8)<br>• Separation from father is linked with more risk of trauma experiences (4)<br>• Adolescents living only with father however, show more PTSD symptoms (4)<br>• Time in the host country does not influence mental health problems (10)<br>• Migrants have the lowest conduct problems scores when living with one parent, while for non-migrants, the lowest scores are for those living with both parents. (4) |

**Table 5.** *Critiquing the quality of the research articles.*

| Aspect | Bronstein et.al | Derluyn et.al | Thommassen et.al | Jakobsen et.al | Nielsen et.al | Elklit et.al | Goosen et.al | Derluyn et.al | Sanchez-Cao etal | Ziaian et.al | Derluyn et.al | Ramel et.al | Betancourt et | Vervliet et | Bean et.al |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Title reflects the content? | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Abstract summarizes the key components? | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Rationale for undertaking the research outlined? | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Literature review comprehensive and up-to-date? | Y | N | Y | N | Y | Y | Y | Y | N | N | Y | Y | Y | Y | Y |
| Aim of the research clearly stated? | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Ethics approval gained? | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Informed consent gained? | Y | Y | N | Y | Y | N | N | Y | N | N | Y | N | N | Y | Y |
| Is it a survey, RCT, or correlation study? | SELF-REPORT SURVEY | SELF-REPORT SURVEY | SOCIAL/PARENT SURVEY | SELF-REPORT SURVEY | SURVEY (SELF+TEACHER) | SELF-REPORT SURVEY | LONGITUD.MED.RCRD | SELF-REPORT SURVEY | SELF-REPORT SURVEY | SURVEY SELF+TEACHER | SURVEY SELF+SOCIAL WORKER | CODING + DOCTOR SURVEY | SELF-REPORT SURVEY | LONGI-TUD. | LONGI-TUD. |
| Hypothesis clearly stated? | N | N | N | N | N | N | Y | Y | N | N | N | N | Y | Y | N |
| Key variables clearly defined? | Y | Y | Y | N | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Population identified? | Y | Y | N | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Sample described? | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Data collection valid and reliable? | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | N | N | Y | Y |
| Response rate stated? | Y | N | Y | Y | Y | N | N/A | N | Y | Y | Y | Y | Y | Y | Y |
| Results presented clearly? | Y | Y | N | Y | Y | Y | Y | N | N | N | Y | Y | N | Y | N |
| Discussion comprehensive? | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Results generalizable? | N | N/A | N | Y | Y | N | N | N | N/A | N | N/A | N | N/A | N/A | N/A |
| Conclusion: clear answer to the aim? | Y | N | N | N | Y | N | Y | N | Y | N | Y | Y | N | Y | N |
| Recommendations made? | N | Y | Y | Y | Y | Y | Y | Y | Y | N | Y | Y | N | Y | Y |

# PICTURE

**Picture 1.** *Table chart of results.*