Resilience in the context of risk and protective factors in refugee youth:

A systematic review

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Abstract

Resilience is not inherited or a fixed quality, but rather it is dependent on present risk and protective factors that make an individual more vulnerable to or safe against mental difficulties. Especially for refugee youth, resilience is dependent on the exposure to trauma in the three stages: the country of origin, fleeing to claim asylum and the arriving country. Due to the complexity of resilience and the dynamic of different factors influencing resilience, a systematic review was conducted which examined resilience in the context of different factors that foster resilience or vulnerability for refugee youth under the age of 18. The terms “refugee children”, “refugee youth” were used along with the terms “resilience”, “resilience factors”, “vulnerability”, “trauma”, “risk factors”, “protective factors” and “factors”. The final selection included 12 studies focusing on a variety of factors affecting resilience. Because of the different factors examined and the complexity of resilience, alongside different exposure rates to trauma, the different age and developmental levels, the living conditions, and the different countries the participants lived and currently resided in, the results were difficult to summarize and compare. All studies however were coherent that refugee youth had a high trauma exposure, while concurrently scoring high on resilience scales. Most of the sample participants were living in refugee camps and/or poor conditions, indicating the importance of intrinsic protective factors and the need for a social component in resilience, which counteract the potential detrimental effects of high trauma exposure. The results show a clear lack of depth in the research field, especially outlining the necessity for longitudinal studies in order to understand the complexities and importance of different factors over time.

Keywords: resilience; refugee children; refugee youth; trauma; vulnerability; protective factors; risk factors

Background

While children make up 31% of the world population, they represent 40% of all internally displaced people (IDPs) and on average account for 50% of the yearly reported refugee count (UN High Commissioner for Refugees [UNHCR], 2020). For comparison, children below the age of 18 in 2009 accounted for 41% of the refugee population, which has since risen to children averaging 50% of all refugees in the world as of 2018 (UNHCR, 2018). This is of concern, as the number of people displaced consistently increases every year, rising from 63.9 million in the year 2015 to 91.9 million in 2020, while the percentage of children has consistently remained around 50% (UNHCR, 2020).

The definition of what constitutes a refugee is often unclear as global and international reports on people of concern in countries of crisis and war address not only refugees but migrants, asylum-seekers, stateless people and IDPs as well. A refugee is a person who has crossed international borders, "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." (UNHCR, 2021, p.1). In addition to migrants, all aforementioned groups leave their homes due to outer circumstances of war, violence, or natural catastrophes. While migrants differentiate themselves through a lack of pressure and last resort to flee, IPDs discern themselves from refugees and asylum-seekers by not crossing an international border in their attempt to flee and seek shelter (OHCHR, 2021). Instead, they are displaced within the borders of their home country. IPDs have the right to protection by the state, whereas refugees, by way of crossing an international border, have the right to international protection. IPDs consistently make up the largest percentage of people of concern (UNHCR, 2020). Lastly, an asylum-seeker is recognized to be a person who is claiming asylum in another country to receive protection, but who has yet to be granted a refugee status, as they must demonstrate the danger to their own lives in their home country makes it impossible for them to return (USA for UNHCR, 2021).

Trauma

Originally, trauma was characterized as a physical blow or a tremor (to the human body), resulting in a serious injury and/or an extreme emotional strain for an individual (Erikson, 1991). The term did not encompass psychological wounds due to the experience of trauma but was defined solely as physical violence (Erikson, 1991). Only over time has the term taken on a broader meaning, including both physical and psychological wounds.

In terms of its occurrence, it is not the rarity that defines trauma, but the enormity and intensity with which it confronts the human organism with an experience of such overwhelming nature that the incoming information cannot be processed (Herman, 2015). Different types of trauma can be categorized into a type I and type II trauma (Krueger, 2017). Type I events can be defined through their limited timespan (natural disasters, traffic accidents, plane crashes), whereas type II, constituting so called-man-made disasters (physical violence, sexual abuse, torture, slavery, war), are categorized by their continuous and/or repetitive nature (Krueger, 2017). The second type is far greater in its potential for repercussions and consequences for an individual, as the individual is not only experiencing utter helplessness and defenselessness, but also the trauma is a continuous / repetitive invasion and violence against their own body (Krueger, 2017).

In comparison to a direct exposure to trauma, there is a potential of being indirectly exposed to trauma through a family member or a close person. The term “transgenerational trauma” is classified as trauma which has been passed through generations and following generations still experience difficulties, traced back to the original traumatic event (Moré, 2013). Psychological difficulties following trauma are not contained to one person either, especially in the family context of children who suffer enormously when one or both parents are traumatized (Moré, 2013). People living in close proximity to a traumatized person can experience a so-called “secondary trauma” as well (May & Wisco, 2016).

However, trauma and its aftermath are not solely confined to one individual or always happening to one individual, especially in the context of migration and becoming a refugee. It is

important to empathize that trauma can also be a collective experience and/or can run through generations. The term “collective trauma” is used for a group of people or even an entire community that experiences a traumatic event (Hirschberger, 2018). In comparison to an individual becoming traumatized, the experience of becoming traumatized is not of an overwhelming nature but rather it is a slower process, which often in the beginning goes unnoticed (Erikson, 1991). But the effect on a group or entire community should not be underestimated as collective trauma has the potential of fundamentally weakening or damaging relationships and the cohesion within the group, leaving each individual on their own to understand and process the trauma (Hirschberger, 2018).

Trauma in children

For children especially, the experience of emotional and physical abuse, violence and war trauma can pose a risk for extreme strain, as it can fundamentally impact and disturb the development of a child (Cook et al., 2017). The severity of the potential psychological consequences, such as PTSD or Complex PTSD vary, not only on the timespan in which the trauma took place or the degree of attention and care the child received afterwards, but also on the age of the child as the trauma was experienced (Van der Kolk, 2000). The processing and storing of incoming information is dependent on the psychological capabilities of the child which in turn are tied to their level of development and age (Van der Kolk, 1988). In comparison to an adult, a child has less cognitive capacities available to them with which they are able to process trauma or multiple traumas (Van der Kolk & Fisler, 1995). Compared to an adult, a child due to their stage of development is far more limited in their semantic and linguistic capabilities to articulate their perceptions and (physical) sensations (Van der Kolk & Fisler, 1995).

Being traumatized through the experience(s) of emotional and physical abuse, war, or violence poses an extreme burden to the child and can have a multitude of consequences in their development (De Young et al., 2011). If traumatized children do not receive adequate help, present symptoms of (Complex) PTSD and psychological difficulties can become chronic (De Young et al., 2011). In Type II trauma specifically, the repeated or continuous experience of trauma in childhood can have

detrimental effects on relationships and establishing and maintaining them as the child moves into adulthood (Veltkamp et al., 1994). Childhood trauma can re-appear in the form of depressive episodes, anxiety disorders, self-harm, sexual problems, loss of appetite or the development of an eating disorder (Veltkamp et al., 1994). Beyond these symptoms experienced over the lifespan, childhood trauma has the potential to fundamentally influence and/or alter the beliefs and convictions an individual holds and the level of self-belief and trust in others (Lubit et al., 2003).

Trauma in refugee children

Every person in their lifetime is confronted with at least one experience that can be defined as traumatic, resulting in a variety of reactions of extreme stress and a potential for emotional strain (Bonanno et al., 2011), but what varies is the physical and psychological reaction for the individual in the aftermath (Bonanno et al., 2011). Due to the lack of shelter and a dependency on help and resources, refugees are subjected to a multitude of possible traumas in their attempt to claim asylum. There are three identified stages where traumatic stress has been identified to occur, (1) in the country of origin, (2) during the attempt to find refuge and claim asylum and (3) in the acclimatization and attempted adaptation in the country in which they sought asylum (Hodes, 2000). Research shows by overwhelming evidence that refugee children are subjected to repeated trauma in all three stages (Metzner et al., 2016). As a consequence of multiple stressors in all three stages, refugee children are more vulnerable to the development of mental health difficulties (Ehntholt & Yule, 2006). The continuous and repeated dependence on safety and the feeling of powerlessness in each situation traps them in a constant state of vulnerability. Hence, commonly reported symptoms in refugee youth vary from PTSD, appearing in the three clusters avoidance, hyperarousal and intrusion / re-experience (Herman, 2015), depression, anxiety, grief and a variety of other psychological difficulties and somatic symptoms, such as sleep or concentration problems, social withdrawal or difficulty with peer relationships (Ehntholt & Yule, 2006).

Resilience

Not all people who experience trauma become traumatized. Existing research on trauma and mental health reflects that, while trauma carries the potential of someone becoming traumatized, it is not inevitable that trauma leads to the development of a psychological disorder and emotional distress (Herman, 2015). In psychology, the term "resilience" refers to the capacity "to maintain relatively stable, healthy levels of psychological and physical functioning" after the exposure "to an isolated and potentially highly disruptive event, such as a the death of close relation or a violent or life-threatening situation" (Bonanno, 2004, p. 20). In contrast to the term recovery, the resilience of an individual allows them to be able to experience only a minimal strain after the experience of trauma and they do not develop a psychological disorder as a consequence (Bonanno et al., 2011). Rather than needing to recover from trauma or adversity, resilience is a dynamic process and the positive adaptation of an individual during or closely following a harmful or traumatic experience or significant adversity (Luthar & Cicchetti, 2000; Masten, 2007; Masten & Curtis, 2000). The term is complex due to it being multidimensional as it can encompass three phenomena, "(1) good outcomes despite high-risk status, (2) sustained competence under threat, and (3) recovery from trauma" (Masten et al., 1990, p. 426).

While in the beginning, resilience was also defined in some leading research as a personal trait (Hu et al., 2015), it is largely acknowledged in the recent existing body of research to be a continuous process (Popham et al., 2021). Some individual traits may contribute to the resilience of an individual, but at its core, resilience is complex due to the multitude of influences, such as genetic, physiological, cognitive, and social factors, the degree of exposure to trauma and the type of trauma that an individual was exposed to (Bonanno & Mancini, 2008; Bonanno et al., 2011; Popham et al., 2021). Due to a multitude of factors and the interaction of those factors with each other, it remains difficult to determine what degree of positive adaptation needs to be displayed to consider an individual resilient (Popham et al., 2021).

In recent history, resilience research is largely focused on external influences, narrowing down risk and protective factors, which either make someone more vulnerable to psychological difficulties or more secure in the face of great difficulties (Fikretoglu & McCreary, 2012). But involved disciplines remain highly diverse, with psychological, psychiatric, sociological and biological approaches (Herrman et al., 2011). This diversity illuminates not only the complexity of resilience but moreover, the necessity of a systematic approach which widens the view to examine, not only the individual itself, but also to understand the multiple dimensions and dynamics that have the potential to positively or negatively impact a person's resilience (Popham et al., 2021). Rather than examining resilience solely through the focus and the abilities of one person, the individual is understood through the broader system, conditions and the environment they are exposed to (Ungar, Ghazinour, & Richter, 2013). An example is Michael Ungar's (2013) adaptation of Bronfenbrenner's bio-social-ecological system model. Michael Ungar (2013) outlined multiple outside factors and dimensions and illustrated the importance of the quality of environment and surroundings which can be become either a risk or protective factor contributing to an individual's level of resilience Bronfenbrenner, believed that human development is based on the interaction / the ongoing relationship of the "active, growing human being" and their close surroundings and the larger context in which the current conditions are integrated in.

The originally defined six systems of Bronfenbrenner (1979) are put into the context of resilience, the individual (e.g. biological and psychological factors), the microsystem (the immediate environment, e.g interpersonal relationships such as friends and families), mesosystem (interrelations of multiple settings, e.g. neighborhood, school, work, social life), exosystem (indirect environment, e.g. for a child the parents' network of friends or relationships at work), macrosystem (broader social context, e.g. cultural values and underlying belief systems) and chronosystem (time component, occurring changes over time) (Popham et al., 2021). The quality of these different factors and the interactions of different systems either facilitate growth and the development of resilience or make an individual more vulnerable to psychological and emotional strain after experiencing trauma (Ungar

et al., 2013). Furthermore, the model shows that someone could display positive adaptation in one system or dimension, such as cognitive abilities and the area of education, but they might struggle with peer relations and a lack of social relationships (Cicchetti & Garmezy, 1993). Both factors could differ drastically in their influence on the resilience the individual displays.

Resilience in refugee minors

While existing studies over the psychological and physical health of young refugees are limited in numbers, there is a substantial amount of evidence indicating that compared to the general population, they are subjected to a higher rate of trauma and moreover, are at a significant risk to develop a psychological disorder (Fazel & Stein, 2002; Li et al., 2016; Steel et al., 2009). In all three stages, in the country of origin, while seeking asylum and in the arriving country, there is a potential risk of encountering risk factors (e.g. losing a family member, experiencing torture or witnessing severe abuse) and extreme stressors (e.g. extreme social isolation, financial difficulties, a lack of privacy, the lack of access to education and the job market or racial discrimination) (Ehntholt & Yule, 2006). There is evidence that present stressors heighten the likelihood of refugees to suffer from psychological disorders (Adam, 2009), experienced trauma has a lasting impact on the emotional and mental wellbeing of children (Metzner et al., 2016) and for refugee children who were separated from their parents or have endured the loss of a family member or a relative, there is an experience of extreme emotional strain (Schellong et al., 2016).

But not all young refugees suffer equally in the aftermath of trauma even though they face similar stressors. Certain factors can be identified on multiple dimensions / systems, which can either be determined as a risk or as a protective factor in the face of adversity and trauma. While protective factors can be viewed as resources which a child can draw back upon in the experience of adversity, risk factors make one more vulnerable to psychological difficulties during and after the experience of adversity (Bynner, 2001). Nevertheless, it cannot be said that both are polar opposites and equal in their gravity, but rather some risk factors may be predisposing conditions, unchangeable for the child, while other factors may be of little significance in terms of resilience (Bynner, 2001). The different

present factors are not only context driven, but also highly dependent on the factor of time (the exposure to certain conditions or the experienced safety due to a longer, secure relationship etc.).

Different factors can be identified as risk and protective factors in all previously listed six systems. On the individual level, in times of coping with adversity, individual personal resources such as efficacy, a good sense of self-worth and self-esteem and especially the belief in one's personal control, contribute positively to the displayed resilience (Daud et al., 2008; Smith & Carlson, 1997). In contrast to a sense of self-esteem and self-efficacy leading to the likelihood of successful coping, a sense of helplessness will heighten the potential of one adversity leading to another (Rutter, 1985).

Furthermore, there is existing data suggesting that the intelligence is a factor which can be influential on the displayed competence in children during high stress levels (Masten et al., 1988; Masten et al., 1999) and that the intelligence can be considered a factor which can contribute to a high level of resilience during adversity (Kandel et al., 1988). Existing data also suggests that self-esteem and displayed prosocial behavior in youth exposed to war and armed conflict, have a positive and protective effect on mental health of children and adolescents (Tol et al., 2013) and that good social skills can contribute positively to resilience (Smith & Carlson, 1997). Fundamentally it can also be said that not only does the overall mental health but also physical health prove to be an important resource in the face of adversity (Smith & Carlson, 1997).

But above individual capabilities and certain genetics, is the risk of developing traumatic stress and the overall health dependent significantly on outside factors such as family relationships / dynamics and social contacts or isolation, living conditions, income or poverty, occupation, unemployment, employment or educational opportunities (Van der Kolk, 2015). In combination with intelligence, parenting and the present schooling serve in a compensational sense if a child is at risk due to living conditions or poverty (Masten et al., 1990). These findings are in line with a study investigating competence in the context of adversity which showed that intellectual functioning and the quality of the relationship between parent and child were significant indicators for the ability to

adapt during adversity (Masten et al., 1999). In contrast, a parent struggling with a mental disorder can serve as a stressors (Rutter, 1985).

Moreover, research also points to the interaction of different factors on the individual and immediate environment (microsystem). The likelihood to develop abilities such as adapting and changing when faced with adversity, a sense of self-esteem and other individual factors such as self-efficacy and problem-solving skills are dependent on the presence of secure and affectionate relationships but furthermore, the experiences of a success and a sense of achievement in the past (Rutter, 1985). One study found that for refugee children, relationships to peer groups in the arriving was a predictor of less long-term psychological problems whereas a lack of family cohesion was one of the predictors of a displayed lower level of competence when exposed to high stress (Montgomery, 2011). Another found that "competence in childhood and late adolescence were generally related to more resources and lower adversity" and that parental upbring and cognitive skills are advantages for one's development which is needed in the face of adversity (Masten et al., 1999, p. 154). Moreover, the study outline that firstly "good resources are less common among children growing up in the context of adversity" but "if reasonably good resources *are* present, competence outcomes are generally good, even in the context of chronic, severe stressors" and secondly, "maladaptive adolescents tend to be stress-reactive and have a history of adversity, low resources, and broad-based competence problems (Masten et al., 1999, p. 161).

Beyond the importance of family relationships, less long-term psychological problem can be traced back to the factor of school participation (Montgomery, 2011) and children's individual traits are shown to have a *direct* effect on school achievements and on social experiences with peer groups in childhood but also continuing into adulthood (Shiner & Masten, 2012). Beyond the immediate environment and close relationships, research points towards the importance of belief and values and the broader experienced community belonging as a protective factor (Ehntholt & Yule, 2006; Smith & Carlson, 1997). Furthermore, the education and the language skills of refugee children in the arriving county are a potential protective factor as the educational level of the mother and the language

proficiency of the child itself are factors which predict less-long term psychological problems (Montgomery, 2011). But for refugee youth, the adjustment and the school environment ranging from language to other student's behavior and their values, can also be experienced as a difficult challenge and a possible stressor (Bates et al., 2005).

Aim of the review

This systematic review aims to examine and evaluate existing studies concerning the inner and outer factors affecting resilience in refugee youth under the age of 18. Although this following review is systematic, a relatively broad approach was used to understand the existing landscape of studies concerning the subject. Concretely, the aims of this review were (1) to outline systematically the existing data on the resilience of refugee children through the evaluation of studies which determine protective and risk factors; (2) to identify possible existing gaps in the research when studying resilience of refugee youth; (3) to contrast the selected studies in their approach, sampling, and strategy.

Methods

In terms of the methodological approach, this review followed the PRISMA protocol for systematic reviews (Moher et al., 2015) in its selection of studies and the overall evaluation of existing studies focusing on resilience in the context of risk and protective factors.

Search strategy

Peer-reviewed publications on the topic of resilience in refugee children were considered through electronically searching five databases (APA PsycInfo, Eric, Medline, SCOPUS, Web of Science) as the topic of resilience is related to the psychological field. The keywords and terms that were used included *refugee children, *refugee youth AND *resilience, *resilience factors, *vulnerability, *trauma, *risk factors, *protective factors, *factors. The broad search resulted in 3394 studies through screening the title, keywords, and the abstract if available. The 3394 firstly selected studies

were closer examined and screened with the determined criteria. Twelve studies were ultimately selected from this review.

Inclusion criteria for the systematic review

The articles which are relevant for this systematic review focused on risk and protective factors influencing resilience in refugee youth. Consequently, the following inclusion criteria is determined for the article selection. The relevant studies must have 1) an inclusion of a measurement of resilience, more concretely in determining possible risk and protective factors which influence resilience, 2) an assessment which focuses on participants which were under the age of 18 in the time the study took place, 3) an outcome variable that focuses on the influences which foster resilience, 4) must have sufficient methodological information present in the studies about the procedure, the data-collection and the process of the analysis to guarantee the quality of the analysis, 5) be peer-reviewed, 6) be written in English.

All studies were screened for their eligibility by applying the inclusivity criteria. The studies which fit the inclusion criteria were then screened on, 1) their study design (cross-sectional, short-term longitudinal and possible existing long-term longitudinal studies); 2) the type of measurements (self-reports, clinical interviews, surveys etc.); 3) the type of symptoms that are determined by the study (physical distress, psychological symptoms, behaviors problems etc.); 4) the sampling procedure of the study; 5) the study participants' demographic characteristics (age, gender, race etc.); 5) the year and timespan of the study.

Refining the selection of studies

Due to the lack of depth of the existing body of research, the search was broad as it included studies which focused on trauma and mental health. Moreover, what made it difficult was the varying definition of resilience. Studies concerning the focus on wellbeing rather than resilience were discarded. However, resilience itself, seen as a factor, were included. Furthermore, studies varied in their focus not only through the applied instruments and their focus, but also because of the targeted participants. Firstly, while all participants were under 18, their age varied from six to 18 years, their

current location and living conditions varied significantly, their trauma exposure varied (direct and indirect exposure; self-experienced trauma, generational trauma) and some had a legal refugee status while most studies focused on refugee youth living in refugee camps.

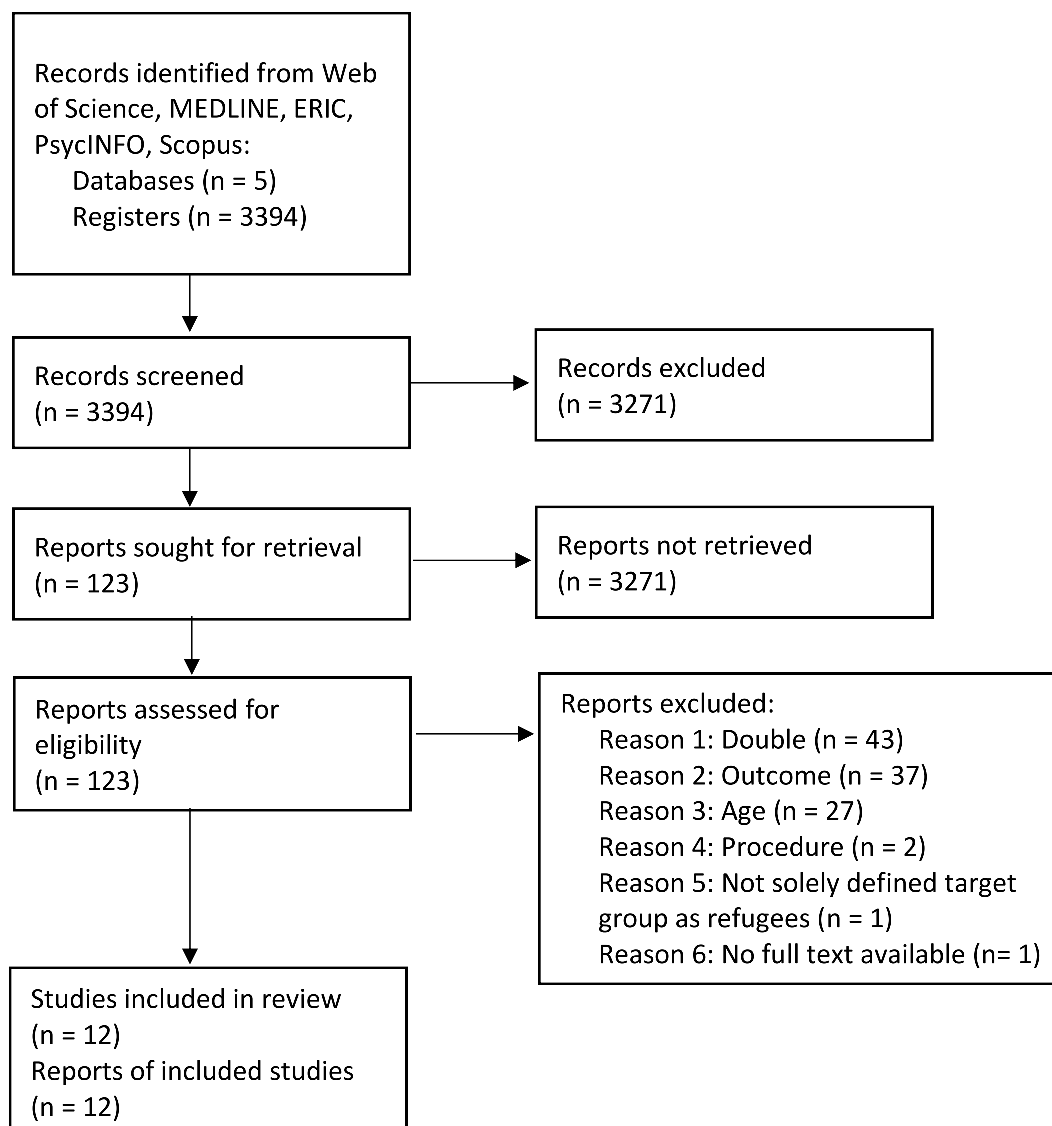

Fig.1. Study selection process, illustrated by the PRISMA flow chart

Results

Figure 1, a flow diagram, illustrates the process which led to the included studies in this systematic review. In total twelve studies were included, focusing on refugee youth under the age of 18 and on resilience in the context of potential risk and protective factors. Among the selected studies, studies varied in the specifically addressed context of resilience but furthermore, in their aim, their

implemented instruments, their study design, in the refugee samples' origin and the residence during data collection.

Table 1
Over of the sample characteristics

Characteristics	
Sample size	1 - 603 participants
Age range Countries of origin	Eritrean (n =1; 45 participants), Jordan (n = 2; 120 participants), Iraq (n = 1; 80 participants), Syria (n = 4; 1652 participants), Afghanistan (n = 1; 7 participants), Palestine (n = 2; 136 participants), Burundi (n = 1; 217 participants)
Currently residing	Sudan (n = 1; 45 participants), United States (n = 1; 1 participant), Sweden (n = 1; 80 participants), Jordan (n = 4; 1652 participants), Canada (n = 1; 7 participants), West Bank / Palestine (n = 2; 136 participants), Syria (n = 1; 119 participants), Tanzania (n = 1; 217 participants)
Current living conditions	Living with foster families (n = 1; 45 participants), Urban Area affected by crisis / war (n = 1; 399 participants), Living in refugee camp (n = 5; 783 participants), Part of the sample living in refugee camp (n = 1; 603 participants), Unspecified (n = 4; 427 participants)

Participants

All studies included male and female participants, with the youngest participants being six and the oldest being 18 years old. Due to the topic of refugees and the targeted age group, the sample number and the current location and the country of origin varied. The smallest sample size was one (Carlson et al., 2012) and the largest was 603 (Panter-Brick et al., 2018). The country of origin varied, with one sample originating from Eritrean (Badri et al., 2020), two from Jordan (Carlson et al., 2012; Panter-Brick, Dajani, Hamadmad, & Hadfield, 2021), one from Iraq (Daud et al., 2008), four from Syria

(Clukay et al., 2019; Dehnel, Dalky, Sudarsan, & Al-Delaimy, 2021; Panter-Brick et al., 2018; Veronese, Pepe, & Giordano, 2021), one from Afghanistan (Kanji & Cameron, 2010), two from Palestine (Mahamid, 2020; Wilson, Turner-Halliday, & Minnis, 2021) and one from Burundi (Scharpf, Mkinga, Masath, & Hecker, 2020).

At the time of the data collection, one sample was residing in Sudan (Badri et al., 2020), one in the United States (Carlson et al., 2012), one in Sweden (Daud et al., 2008), four in Jordan (Clukay et al., 2019; Dehnel et al., 2021; Panter-Brick et al., 2018; Veronese et al., 2021), one in Canada (Kanji & Cameron, 2010), two in West Bank / Palestine (Mahamid, 2020; Wilson et al., 2021), one in Syria (Panter-Brick et al., 2021) and one in Tanzania (Scharpf et al., 2020).

Study design

A variety of instruments were used to assess resilience in connection to mental health, trauma exposure and possible risk and protective factors, fostering vulnerability or resilience. Most common was a mixed method cross-sectional approach with five studies (Badri et al., 2020; Daud et al., 2008; Dehnel et al., 2021; Panter-Brick et al., 2018; Wilson et al., 2021), followed by three cross-sectional designs (Panter-Brick et al., 2021; Scharpf et al., 2020; Veronese et al., 2021), three case studies (Carlson et al., 2012; Kanji & Cameron, 2010; Mahamid, 2020), and one longitudinal cohort (Clukay et al., 2019). One study used a comparison group in order to contrast Syrian refugee resilience and trauma exposure and identify possible risk and protective factors with young people residing in the same arriving country through a cross-sectional mixed methods approach (Wilson et al., 2021).

Assessed level of resilience

All included studies varied in their applied instruments and assessment due to the complexity and multiple influences of resilience. When solely measuring resilience in young people, two instruments were applied, the Child and Youth Resilience Measure with 12-items [CYRM-12] (Liebenberg et al., 2013) and the Child and Resilience Measure with 28-items [CYRM-28] (Ungar & Liebenberg, 2011). Both were developed to measure resilience in children and adolescents with the intent to capture the complexity of resilience, accounting for cultural diversity and contextual

differences across multiple youth populations (Liebenberg et al., 2013). Originally the CYRM-28 was developed, targeting different dimensions of resilience, resulting similarly to Bronfenbrenner's ecological model, in individual, relational, communal, and cultural clusters as dimensions or factors influencing resilience (Liebenberg et al., 2013). Later due to a better inclusion in surveys, a shortened version was developed which would be termed the CYRM-12 (Liebenberg et al., 2013).

Of the 12 total studies, six studies applied at least one of the two. Due to the adaption of the instrument for Arabic-speaking refugee youth and for the targeted sample, a comparison should be done with caution as the majority of studies used an individual translated version and in some cases the instrument was adapted or shortened, resulting in a difference in items and scales. However, notable were resilience levels, especially in contrast with the exposure to trauma. Four studies assessed resilience through the CYRM-12 when the range was 12 – 60, in one study males had a mean score of 49.8 (SD = 6.77) and females a mean score of 49.1 (SD = 7.00) (Clukay et al., 2019), in the second study the sample's mean score was 49.81 (SD = 81) (Panter-Brick et al., 2021), and in the third study the sample met a mean score of 49.56 (SD = 6.83) (Panter-Brick et al., 2018). In a fourth study assessing resilience through the CYRM-12, with a range of 0 – 36, the mean score was 31.1 (SD = 4.1) (Dehnel et al., 2021). The three subcategories, individual capacities and resources, relationships with primary caregivers and contextual factors, showed that a the large majority (over 80% of the sample) exhibited personal skills, relational resilience characteristics and the presence of support such as education, culture or spirituality (Dehnel et al., 2021).

Four studies applied the CYRM-28. With a range of 0 – 84, the mean score in one study was 70.9 (SD = 8.5) (Dehnel et al., 2021), in the second study, the mean score of the sample was 111.41 (SD = 15.03) with a range of 28 – 140 (Panter-Brick et al., 2018), the third study's mean score with the same range was 110.7 (SD = 16.73) (Veronese et al., 2021) and the fourth study found that 55.8% of the sample had a high resilience (Badri et al., 2020).

Table 2
Overview of Study Characteristics and Risk and Protective Factors

Author(s), year of publication	Age group (Mean Age)	Sample Size (n=)	Study design	Country of origin	Current location	Applied instruments	Resilience CYRM Mean Score (SD; range)	Trauma Mean Score (SD)	Examined factors
Badri et al. (2020)	12 -17 (15.36)	45	Cross-sectional mixed method	Eritrean	Sudan (with foster parents)	(1) Hopkins Symptom Checklist-25 (HSCL); (2) CYRM-28	CYRM-28: 3.20 (0.55); creation of low- and high-level group: 55.8% high resilience		Harassment, Racism, Financial difficulties, Acculturation Distress, Restricted Freedom
Carlson et al. (2012)	16	1	Case study	Sudan	United States				Trauma Exposure, Immigration, War-related Atrocities, Lack of Basic Services, Violence, Health Problems, Easy temperament, Good Coping Skills, Belief / Religion, School Performance, Family, Community, Culture / Cultural Identity

Table 2 (continued)

Author(s), year of publication	Age group (Mean Age)	Sample Size (n=)	Study design	Country of origin	Current location	Applied instruments	Resilience CYRM Mean Score (SD; range)	Trauma Mean Score (SD)	Examined factors
Clukay et al. (2019)	12-18 (14.35)	399	Longitudinal cohort	Syria	Jordan (refugee camps)	(1) Traumatic Events Checklist; (2) CYRM-12; (3) Perceived Stress Scale (PSS); (4) Human Distress Scale (HD) (5) Human Insecurity Scale (HI); (6) Arab Youth Mental Health Scale (AYMH); (7) SDQ; (8) Children's Revised Impact on Event Scale (CRIES-8)	CYRM-12: Male 49.8 (6.77; 12-60), Female 49.1 (7.00; 12-60)	Male 6.76 (3.25) Female 5.81 (3.21)	Trauma Exposure, MAOA Gene, Insecurity
Daud et al. (2008)	6-17 (12.1)	80	Cross-sectional mixed method	Iraq	Sweden (unspecified)	(1) Revised Version of Diagnostic Interview for Children and Adolescents (DICA-R); (2) Post-Traumatic Stress Symptoms Checklist; (3) Wechsler Intelligence Scale for Children, 3rd Edition (WISC-III); 'I Think I Am' Questionnaire (ITIA); (5) SDQ (Swedish Version)		War related 3.77 (3.68)	Trauma Exposure, Intelligence, Self-Esteem

Table 2 (continued)

Author(s), year of publication	Age group (Mean Age)	Sample Size (n=)	Study design	Country of origin	Current location	Applied instruments	Resilience CYRM Mean Score (SD; range)	Trauma Mean Score (SD)	Examined factors
Dehnel et al. (2021)	10-17 (13.4)	339 (+ caregiver)	Cross-sectional mixed method	Syria	Jordan (unspecified living conditions)	(1) History of Trauma: Harvard Uppsala Trauma Questionnaire for Children (HTQ and HUTQ-C); (2) Children's Depression Inventory 2 (CDI-2); (3) 28-items Child and Youth Resilience Measure (CYRM-28) with 3 subscales (individual capacities and resources, relationships with primary caregivers, contextual factors)	(1) CYRM-12: 31.1 (4.1; 0-36) (2) CYRM-28: 70.9 (8.5; 0-84)	8.8 (9.4)	Trauma exposure, Resilience
Kanji et al. (2010)	13-17	7	Case study	Afghanistan	Canada				Dwelling in Adversity, Communal Support, Family Support, Belief / Religion, Cultural Identity, School, Making New Friends, Geographical Distance to Relatives and Friends

Table 2 (continued)

Author(s), year of publication	Age group (Mean Age)	Sample Size (n=)	Study design	Country of origin	Current location	Applied instruments	Resilience CYRM Mean Score (SD; range)	Trauma Mean Score (SD)	Examined factors
Mahamid (2020)	14-16 (14.92)	30	Case study	Palestine	West Bank				Trauma Exposure, Forced Displacement, Loss (of home, relatives etc.), Refugee Experience, Re-Experiencing Pain, Lack of Security, Hope and Basic Services, Lack of Justice and Equality, Quality of Life, Living Conditions, Self-Efficacy, Effective Coping Skills, Psychological Hardiness
Panter-Brick et al. (2021)	14-18 (15.9)	119	Cross-sectional	Syria	Jordan (refugee camps)	(1) Checklist of Household Items; (2) 10-item Human Insecurity Scale; (3) SDQ; (4) CYRM-12	CYRM-12: 49.81 (7.64)		Socioeconomic Status, Insecurity, Prosocial Behaviour,

Table 2 (continued)

Author(s), year of publication	Age group (Mean Age)	Sample Size (n=)	Study design	Country of origin	Current location	Applied instruments	Resilience CYRM Mean Score (SD; range)	Trauma Mean Score (SD)	Examined factors
Panter-Brick et al. (2018)	11-18 (14.22)	603 (+ parents)	Cross-sectional mixed method	Syria	Jordan (part of the sample living in refugee camp)	(1) CYRM-28; (2) Household Wealth; (3) 21-Items Trauma Events Checklist; (4) AYMH; (5) SDQ; (6) PSS; (7) 12-Item human Distress Scale	(1) CYRM-12: 49.56 (6.83; 12-60); (2) CYRM-28: 111.41 (15.03; 28-140)	6.52 (3.33)	Socioeconomic Status, Trauma Exposure, Prosocial Behaviour
Scharpf et al. (2020)	7-15 (12.16)	217 (+ mothers)	Cross-sectional	Burundian	Tanzania (refugee camps)	(1) PTSD Reaction Index for DSM-5 (PTSD-RI-5); (2) SDQ; (3) Checklist by Neuner 22-items; (4) Adapted Kidcope Version; (5) Parent-Child conflict Tactic Scales (CTSPC); (6) (Shortened) People in My Life Questionnaire (PIML)			Prosocial Behaviour, Trauma Exposure, Violence by Mothers, Friendship Quality, Community Violence

Table 2 (continued)

Author(s), year of publication	**Age group (Mean Age)**	**Sample Size (n=)**	**Study design**	**Country of origin**	**Current location**	**Applied instruments**	**Resilience CYRM Mean Score (SD; range)**	**Trauma Mean Score (SD)**	**Examined factors**
Veronese et al. (2021)	7-14 (10.49)	311	Cross-sectional	Syria	Jordan (refugee camps)	(1) CYRM-28; (2) Childhood War Trauma Questionnaire (CWTQ); (3) Strengths and Difficulties Questionnaire (SDQ) with 5 dimensions: emotional problems, conduct problems, hyperactivity/inattention, peer relationship problems, prosocial behaviour; (4) Post-Traumatic Stress Reaction Checklist for Children (PTSRC)	CYRM-28: 110.7 (16.73; 28-140)	3.55 (2.79)	Trauma Exposure, Prosocial Behaviour
Wilson et al. (2021)	11-17	106, 8 selected for interviews	Cross-sectional mixed method (with comparison group)	Palestine	West Bank	(1) SDQ; (2) Patient Health Questionnaire-15 (PHQ-15); (3) CYRM-28			Poverty, Violence, Marginalisation, Supportive Relationships, Youth Education, Social Participation

Risk factors

The trauma exposure compared to the general population was high, serving as the most prevalent risk factor across all studies which assessed trauma exposure. One study found that all participants were exposed to at least one trauma and almost half (48.6%) experienced a highly salient trauma, heard about it or were a witness to it, attaining a mean score of 8.8 with a minimum of zero and a maximum score of 57 (Dehnel et al., 2021). Another study showed similar high exposure rates, with almost half (46.3%) of the participants being exposed to two or more traumatic events and with 10% even being confronted with seven different traumas, scoring a mean score of 3.5 events connected to military violence, war or displacement (Veronese et al., 2021). Furthermore, another study found that Syrian refugees, who spend three years in the arriving country, were averaging 6.52 (SD = 3.33) traumatic events (Panter-Brick et al., 2018).

Especially the theme of violence, war, forced displacement and severe traumatic loss serve as the most experienced traumatic events and as significant risk factors (Carlson et al., 2012; Dehnel et al., 2021; Mahamid, 2020; Scharpf et al., 2020). The exposure to war-related traumas, violence within the community of the arriving country and violence by a parent, were significantly positively associated with PTSD symptoms as well as internalizing problems (Scharpf et al., 2020). Moreover, in terms of gender, one study found that males were exposed to more traumatic events than females, but in contrast, females scored significantly higher on psychological stress, insecurity, and anxiety and depression scales (Clukay et al., 2019).

Qualitative results add to the enormity of experienced trauma for refugee youth. Next to experienced violence or witnessed trauma (Carlson et al., 2012; Scharpf et al., 2020; Wilson et al., 2021), refugee youth experience multiple stressors in the arriving country, and are exposed to traumatic events such as marginalization and harassment (Badri et al., 2020; Wilson et al., 2021); the of loss of home, family, general sense of freedom, stability and sense of hope (Badri et al., 2020; Carlson et al., 2012; Mahamid, 2020); poverty and financial difficulties (Badri et al., 2020; Wilson et

al., 2021); lack of food, shelter and health problems (Carlson et al., 2012); and a potential struggle to make friends and adapt in school (Kanji & Cameron, 2010).

The non-immediate environment added stressors for young people as one study found that the unemployment of parents was associated with psychosomatic complaints and that young people with unemployed parents had lower scores when measuring for resilience (Wilson et al., 2021). The same study found that poorer socioeconomic circumstances were associated with a higher risk of developing health problems (Wilson et al., 2021).

These outer, immediate circumstances are reflected in the studies which assess mental health, traumatic stress, and mental disorders due to outer, immediate circumstances over a prolonged period. Noteworthy were individual factors which influenced young people to either become more vulnerable to the development of mental health disorders and health difficulties. Two studies assessed depression symptomatic. With 51.8%, more than half met the defined criteria for significant depressive symptoms while 27.8% voiced suicidal ideations (Dehnel et al., 2021). The high depression scores were supported by the high prevalence rates of depression and anxiety in Eritrean unaccompanied refugee minors, with 88.9% scoring above the cutoff value for depression and anxiety (Badri et al., 2020).

In addition, young refugees scored significantly higher on the Strength and Difficulties Questionnaire (SDQ) in one study, measuring prosocial behavior, emotional symptoms, conduct problems, hyperactivity and peer problems, indicating that in contrast to the comparison group, refugee youth are at a significant higher risk to develop a mental disorder (Wilson et al., 2021). When assessing somatic symptomatic in the same study, with 31% of the sample scoring for “minimal somatic symptom levels'', 22% meeting the threshold for “medium” levels and 19% of the participants could be categorized in the “high” levels (Wilson et al., 2021), adding to the detriment of trauma exposure over a long time period.

Protective factors

Resilience, defined as a protective factor in itself, showed to serve as a strong protective against depression (Dehnel et al., 2021) and was associated with a tendency towards more prosocial behavior and a display of fewer emotional problems (Veronese et al., 2021). Moreover, when the participants were divided based on the attained resilience score, the group with a higher resilience score also obtained a higher score for prosocial behavior which the participants with lower scores, "showed higher levels of emotional problems, re-experiencing and avoidance (Veronese et al., 2021). These findings are in line with the identification of the protection factor of supportive relationships and social participation, whether in the context of family, community or peer relations which can be established due to individual factors such as prosocial behavior and competence (Scharpf et al., 2020; Wilson et al., 2021). In the twelve included studies, seven studies identified prosocial behavior as one of the fundamental protective factors in the dimension of individual capabilities. For example, prosocial behavior and fewer emotional problems were in general associated with resilience whereas in contrast, emotional problems and a display of trauma symptoms were found to be mainly correlated to trauma (Veronese et al., 2021). Another study found that resilience was positively associated with prosocial behaviors' (Panter-Brick et al., 2018). Other individual factors identified in a case study were self-efficacy, effective coping skills, psychological hardiness and having a sense of responsibility (Mahamid, 2020). Similar findings came from another study which identified good coping skills and an easy temperament as factors influencing the displayed level of resilience (Carlson et al., 2012).

In the immediate environment, relationships were the most prominent protective factor. Next to family ties and support (Carlson et al., 2012; Kanji & Cameron, 2010), supportive relationships and peer relationships were identified as a key to fostering resilience (Wilson et al., 2021). Another study, focusing on unaccompanied refugee minors living with foster families, found that unaccompanied refugee minors living with a related foster parent, showed significantly higher levels of resilience (Badri et al., 2020), noting the importance of family and stability. Moreover, another study found that

the friendship quality was significantly negatively related to PTSD symptoms (Scharpf et al., 2020), outlining the significance not only of making friends in the arriving country but the importance of feeling connected to peers. Due to a language barrier but also due to cultural differences and other circumstances, refugee youth in many cases would feel disconnected or feel like relationships in the present lacked depth and understanding compared to friendships back home. Beyond the immediate environment, youth education and social participation was identified in one study as protective factors (Wilson et al., 2021). Two other studies identified community and its support in the arriving country, a higher belief / religion, school (performance) and one's cultural identity as important protective factors (Carlson et al., 2012; Kanji & Cameron, 2010).

Discussion

This systematic review identified 12 studies which examine the resilience of refugee youth, influenced by identified risk and protective factors. With three main aims, this systematic review was approached, (1) to outline systematically the existing data on the resilience of refugee children through the evaluation of studies which determine protective and risk factors; (2) to identify possible existing gaps in the research when studying resilience of refugee youth; (3) to contrast the selected studies in their approach, sampling, and strategy.

The results show that, a comparison of existing data is difficult due to the age range of the participants from six to 18 years, the current location, circumstances and living conditions of the different samples, the trauma exposure (direct and indirect exposure, self-experienced trauma, generational trauma) and the difference in prospects depending on their asylum status. In combination with the complexity of resilience and the sensitivity of the subject in connection to the targeted age group, broader conclusions for the resilience of refugee youth should be drawn with great caution. However, even though the gravity of the influences of different factors is difficult to determine, it can be said that there are a variety of risk and protective factors which influence the displayed resilience shown by refugee youth. Moreover, when measuring resilience, refugee youth

achieved high resilience scores (Badri et al., 2020; Clukay et al., 2019; Dehnel et al., 2021; Panter-Brick et al., 2021; Panter-Brick et al., 2018; Veronese et al., 2021), despite most of the samples living in refugee camps and experiencing a lack of safety and security.

While the trauma exposure and outer conditions would logically point to a lower displayed resilience, intrinsic protective factors, such as prosocial behavior in connection with the quality of relationships, social participation, and a belief in a higher power in the present, could possibly explain higher resilience scores. Whereas compared to the general sample population, refugee youth overall have significantly fewer resilience-enhancing resources available to them (Wilson et al., 2021), refugee youth seem to draw strength from the limited resilience resources they do have, such as their prosocial behavior, the importance they attribute to peer and family relationships, social and educational participation, and religion. However, even though there is an indication for some factors playing a fundamental role in the displayed resilience in refugee youth, the results should be taken with caution. The different examined risk and protective factors in each study and the complexity of resilience, makes it hard to draw clear conclusions on the importance of certain factors over others or the dynamics of individual and environment factors.

Implications for policy, practice, and research

The review outlines the clear lack of resilience enhancing resources. Refugee youth lack the coverage of their basic needs which exposes their living in abhorrent conditions, with the majority of them spending long(er) periods of time in refugee camps without their families and supportive, familiar, relationships. Furthermore, the refugee camps are located outside of civilization and communities which could offer support, care, and a space where they are able to feel safe. The review especially outlines the importance of trusting relationships, the support of local communities, access to education and their belief in a higher power as refugee youth face a lack of resilience enhancing resources in the face of poor living conditions and a history of trauma which is significantly higher compared to the general population. In addition to improving living conditions, the focus of policy and practice should be on establishing access to professional help, with an emphasis on cultural sensitivity

and, above all, the value of human interaction and connectedness. This review shows a fundamental understanding that healing takes place, not in isolation, but rather through communities, a shared faith and creating meaning, and a belief in a possible future through the access to education.

It is not only important to understand the complexity of resilience in refugee youth in policy and practice, but also in future research. Due to the uncertainty of claiming asylum and the often temporary stay in refugee camps, there is a lack of longitudinal data to understand the complexity of resilience and the importance of different risk and protective factors over longer periods of time. This review illustrates the clear lack of depth in the research field, while simultaneously illustrating difficulty of comparing studies due to the applied instruments and different focuses on risk or protective factors, the targeted age group, and the lack of ability to conduct a longitudinal work. All twelve studies, except one (Clukay et al., 2019), did not select a longitudinal approach which shows the need for future research to shine a light on the conditions refugee youth live in, in order to provide better care in the future.

Beyond the lack of longitudinal data concerning the resilience in refugee youth, this review outlines a lack of depth in the research field itself. Individual studies are difficult to compare due to different targeted sample groups, the difference of country of origin, current living conditions and examined risk and protective factors. While included studies address a variety of concerns and potential factors influencing the resilience of refugee youth, it also makes existing data difficult to compare and condense to outline a clear overview about existing research. Especially with steeply increasing numbers of refugees each year, it would be important to focus on closing existing gaps, not only for future research but also to establish better effective practices and care for refugee youth in the future.

Limitations

A lack of longitudinal data questions what weight quantitative measures carry when measuring resilience and what importance can be attributed to qualitative work, identifying risk and protective factors with an overall relatively small sample size. In addition, most instruments were

translated, making their cultural validity questionable and pointing to the necessity for standardized measurements in the research field, to compare and draw clearer conclusions from the existing data. Moreover, possible methodological limitations can apply from this broader approach, but also because of the target subject group of the studies. Limitations may occur from language barriers, the level of expressions due to age and language, and understanding due to age and cultural differences. Secondly, due to the limited or rather small existing research on the topic, the valid and existing instruments which can be applied are few.

In terms of the systematic review itself, it is limited due to the relatively small number of databases that were searched. Additionally, while this review identifies gaps and a lack of depth in the research field concerning the resilience in refugee youth, the outcomes of each study and the existing data is hard to condense due to the mixture of qualitative and qualitative data and the different risk and protective factors on the individual, relational, communal, and cultural dimensions which were examined. Due to the complexity of resilience and the variety of risk and protective factors, it is difficult to determine the importance of certain existing factors over others and to draw clear conclusions on certain dynamics influencing the current displayed resilience of refugee youth. This review might add to understanding the complexity of resilience, while also outlining the difficulty of determining how effective it is to compare, contrast and summarize existing data and draw clear conclusions when it comes to such a variety of risk and protective factors and their influence on resilience.

Conclusion

This review illustrates the variety of risk and protective factors influencing the displayed resilience of refugee youth, who also show a high level of resilience in the face of severe trauma exposure and current stressors. The living conditions in the present can serve as significant resilience enhancing resources but also stressors in the presence such as discrimincation, violence or harassment can serve as factors which can put young refugees at risk for developing psychological

problems. Beyond the immediate surroundings and the poor living conditions, the examined research shows the importance of prosocial behavior in establishing trusting relationships and a connection to community and an intrinsic motivation from a belief in a higher power.

Overall, further research is needed to understand better the dynamic of different risk and protective factors over time and the importance of certain protective factors for refugee youth.

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