Children and Young Asylum-Seekers in Iceland

Migration, Psychological Factors, and Mental Health

by

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Abstract

Due to changing global circumstances in recent years, Iceland has experienced a sharp increase in forced migrant children, youth, and families seeking refuge. The aim of this doctoral thesis was to examine the migration experience of children and youth who claimed asylum in Iceland upon arrival and to explore psychosocial factors' role in their mental health post-migration. The study also examined participants' acculturation strategy preferences, their relationship to mental health outcomes, and whether there was support for the integration hypothesis in Iceland (i.e., integration is related to better mental health outcomes than marginalization).

Two assessment interviews (including self-assessment measures) were conducted approximately eight months apart, with children and youth who fled to Iceland between 2016 and 2020. Seventy-five individuals ages 13 to 24 (M = 19.7, SD = 3.0, 67% male) participated during the first interview, while 43 participants (M = 20.16, SD = 3.1, 56% male) remained in the study and were interviewed a second time.

The results presented in this thesis give valuable insight into the migration experience of forced migrant children and youth fleeing to Iceland. Study participants were, on average, exposed to numerous stressful life events (SLEs), some of which acted as push factors forcing them to leave their home countries. Low social support and traveling alone were related to greater vulnerability to SLEs exposure. Furthermore, SLEs experiences were related to an increased risk of developing post-traumatic stress disorder (PTSD) and other psychological symptoms (i.e., anxiety, depression, and externalizing symptoms). PTSD symptoms remained unchanged over two points in time. Still, higher levels of perceived social support from peers were related to less severity of PTSD symptoms. Furthermore, perceived parental social support was positively related to Icelandic language proficiency. Social support, particularly from peers, and fewer PTSD symptoms were also associated with greater mental well-being at time point two. Lastly,

results support the integration hypothesis in Iceland as participants who favored integration showed the best mental health outcomes (i.e., fewer PTSD and depression symptoms), and those who preferred (or were forced to choose) marginalization showed the poorest mental health outcomes.

These results highlight the importance of social support for a positive migration experience, adaptation process, and mental health and well-being of forced migrant children and youth in Iceland. They also demonstrate that the migration experience of these children and youth is a dynamic process involving a confluence of factors occurring during pre-migration, flight, and post-migration, which can impact their lives and mental health. Lastly, they provide needed knowledge on a field of study that has not yet been thoroughly explored in Iceland.

Keywords:

Children, Youth, Forced Migration, Psychosocial Factors, Acculturation, Mental Health

Ágrip

Breyttar aðstæður í heiminum á undanförnum árum hafa valdið því að fjöldi barna, ungmenna og fjölskyldna sem leita skjóls á Íslandi fer vaxandi. Markmið þessarar doktorsrannsóknar var að kanna upplifun barna og ungmenna af því að flytja búferlum til Íslands og sækja þar um alþjóðlega vernd ásamt því að kanna áhrif sálfélagslegra þátta á geðheilsu þeirra eftir flutning.

Í rannsókninni voru einnig kannaðar þær aðferðir sem þátttakendur kusu til að aðlagast menningu landsins, samspili aðferðanna við geðheilsu þátttakenda og hvort stuðningur væri fyrir samþættingartilgátunni á Íslandi (þ.e. að samþætting hafi jákvæðari áhrif á geðheilsu en jaðarsetning).

Tvö matsviðtöl (ásamt fyrirlagningu sjálfsmatskvarða) voru tekin með átta mánaða millibili við börn og ungmenni sem fluttu búferlum til Íslands og sóttu um alþjóðlega vernd á árunum frá 2016 til 2020. Sjötíu og fimm einstaklingar á aldrinum 13 til 24 ára (*M* = 19,7, *SF* = 3,0, 67% karlar) tóku þátt í fyrsta viðtalinu en 43 þátttakendur (*M* = 20,16, *SF* = 3,1, 56% karlar) héldu áfram í rannsókninni og tóku þátt í seinna viðtalinu.

Niðurstöðurnar sem kynntar eru í þessari ritgerð gefa innsýn í upplifun þeirra barna og ungmenna sem leita skjóls á Íslandi. Þátttakendur rannsóknarinnar upplifðu að meðaltali fjölmarga streituvaldandi atburði sem sumir hverjir ollu því að þátttakendur neyddust til að yfirgefa heimkynni sín. Þau sem fengu lítinn félagslegan stuðning eða ferðuðust ein til Íslands voru líklegri til að upplifa streituvaldandi atburði. Ennfremur tengdist streituvaldandi reynsla auknum líkum á að greina frá einkennum áfallastreitu og sálrænna einkenna (t.d. kvíða, þunglyndis og hegðunarvanda). Einkenni áfallastreitu héldust óbreytt á milli þeirra tveggja matsviðtala sem tekin voru. Engu að síður tengdist aukinn félagslegur stuðningur frá jafnöldrum færri einkennum áfallastreitu. Að auki hafði félagslegur stuðningur foreldra jákvæð áhrif á íslenskukunnáttu barna og ungmenna. Félagslegur stuðningur, sérstaklega frá jafnöldrum, og færri einkenni áfallastreitu voru einnig

tengd betri andlegri vellíðan á tímapunkti tvö. Að lokum styðja niðurstöður rannsóknarinnar við samþættingartilgátuna á Íslandi þar sem geðheilsa þátttakenda sem voru hlynnt samþættingu var betri (þ.e. færri einkenni áfallastreitu og þunglyndis) en þeirra sem kusu (eða voru neydd til að velja) jaðarsetningu.

Þessar niðurstöður sýna mikilvægi félagslegs stuðnings fyrir jákvæða upplifun af fólksflutningum, aðlögunarferlinu og fyrir geðheilsu og vellíðan þeirra barna og ungmenna sem neyðast til að leita skjóls á Íslandi. Niðurstöðurnar sýna einnig að reynsla þessara barna og ungmenna af búferlaflutningum er síbreytilegt ferli sem felur í sér samspil ýmissa þátta sem eiga sér stað fyrir fólksflutninga, á flóttanum og eftir fólksflutninga, og allir þessir þættir geta haft áhrif á líf þeirra og geðheilsu. Loks veita niðurstöðurnar nauðsynlega þekkingu á fræðasviði sem ekki hefur enn verið kannað til hlítar á Íslandi.

Lykilorð:

Börn, ungmenni, þvingaðir fólksflutningar, sálfélagslegir þættir, menningaraðlögun, geðheilsa

Acknowledgments

When I started my PhD studies, I knew the journey would be long and perhaps challenging along the way. Looking back, I am surprised to find myself writing this doctoral thesis, and I feel humbled and appreciative of all the support I have received along the way.

First, I would like to thank my thesis Supervisor, Dr. Bryndís Björk Ásgeirsdóttir, for her constant support. She believed in me from the get-go and guided me throughout my doctoral journey with patience and dedication. I am also highly grateful to Dr. David Lackland Sam, Thesis Committee member, whose experience and knowledge have been an incredible source of inspiration and who has taught me a great deal about the subject of this thesis. I am also deeply thankful to Dr. Giorgia Doná, Thesis Committee member, for her constructive criticism and guidance throughout the project. I consider myself exceptionally lucky to have worked with a solid and competent group of individuals who excel in their fields.

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Finally, I thank the interpreters and study participants, as this study would not have been possible without their collaboration.

Statement of Interest

I consider myself fortunate to come from three different countries. My mother is Chilean, my father is Colombian, and I was born in Venezuela. As a child and young adult, I frequently traveled to all three countries and lived in different countries. Still, I always felt out of place, not from here or there. My life experiences and family background exposed me to South America's security issues, its political history of dictatorships and civil movements, and the vast opportunities that await us beyond the borders of our countries of birth. They also made me aware of the external forces that shape who we are and who we become.

Moving to Iceland was a choice I made and was not forced upon me. I wanted to be a child clinical psychologist and saw the opportunity to become one in Iceland. I recognized early on how crucial it was to learn Icelandic in order to fully engage in society. I understood how essential it was to speak and understand Icelandic correctly to be treated equally as a professional in Iceland.

As a clinical psychologist, I sought to assimilate by working with all children, adolescents, and their families, not only those with an immigrant background. However, my work at the Children's House (Barnahus) led me to meet children and families from diverse backgrounds and to conduct asylum interviews with unaccompanied children for the Directorate of Immigration. I learned about these children's hardships before migrating to Iceland and the obstacles they encountered as immigrants. I felt identified with their attempts to belong and adapt and how these affected their well-being positively and negatively. This work showed me that we knew very little about these children's mental health and adaption in Iceland and that further research was needed to understand their circumstances to be able to tailor services and treatments to their specific needs. As a result, the study on which this thesis is based was born.

List of Studies

This doctoral thesis is based on the following original publications, which are referred to in the text by their Roman numerals (I-III):

I. Cardenas, P., Doná, G., Sam, D.L., & Ásgeirsdóttir, B. B. (2023). *The migration experience of children and youth who seek asylum in Iceland* [Manuscript submitted for publication]. Department of Psychology, Reykjavik University

II. Cardenas, P., Ásgeirsdóttir, B. B., Sam, D. L., & Doná, G. (2022). Stressful life events, psychological symptoms, and social support of children and young asylum-Seekers in Iceland. *Scandinavian Journal of Public Health.* Advance online publication. https://doi.org/10.1177/14034948221142080

III. Cardenas, P., Ásgeirsdóttir, B. B., Doná, G., & Sam, D. L. (2022). *The integration hypothesis and positive mental health outcomes for children and young asylum-seekers in Iceland.* [Manuscript submitted for publication]. Department of Psychology, Reykjavik University

Declaration of Contribution

The doctoral candidate, Paola Cardenas (PC), wrote this doctoral thesis under the guidance of my supervisor Dr. Bryndís Björk Ásgeirsdóttir (BBÁ), and Thesis Committee members Dr. David Lackland Sam (DLS) and Dr. Giorgia Doná (GD). PC designed and organized the study and drafted the study proposal under the guidance of BBÁ and DLS. Grant applications were written by PC with advice from BBÁ and DLS. The contribution to each academic paper was as follows:

I. PC was responsible for the study design, data collection and analysis, interpreting results, and drafting the manuscript. All co-authors (BBÁ, DLS, and GD) made revisions to the manuscript for relevant scientific and intellectual content.

II. PC was responsible for the study design, data collection and analysis, interpreting results, and drafting the manuscript. All co-authors (BBÁ, DLS, and GD) made revisions to the manuscript for relevant scientific and intellectual content.

III. PC was responsible for the study design, data collection and analysis, interpreting results, and manuscript drafting. All co-authors (BBÁ, DLS, and GD) revised the manuscript for relevant scientific and intellectual content.

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List of Abbreviations

ASC	Accompanied Asylum-seeking Child
DI	Directorate of Immigration
HSCL-37A	Hopkins Symptom Checklist-37 for Adolescents
ID	Icelandi Identification
PSS	Parental Support Scale
PTSD	Post-Traumatic Stress Disorder
RATS	The Reactions of Adolescents to Traumatic Stress Questionnaire
SWEMWBS	Short version of the Warwick–Edinburgh Mental Wellbeing Scale
SLEs	Stressful Life Events
T1	Time point one (first assessment interview)
T2	Time point two (second assessment interview)
UASC	Unaccompanied Asylum-seeking Child
UN	United Nations
UNHCR	United Nations High Commissioner for Refugees
VAI	Vancouver Index of Acculturation

1 Introduction

War, violence, human rights violations, poverty, and climate change are among the many reasons why millions of people are forced to flee their homes in search of safety and protection. By the end of 2021, 40.9% of the 89.3 million people forcibly displaced worldwide were children below 18 (United Nations High Commissioner for Refugees [UNHCR], 2022). Child and youth migration is a complex, multi-directional, and dynamic process that occurs in response to economic and social global change (Veale & Doná, 2014). Adverse experiences pre-migration and the circumstances in the receiving country can play a significant role in the development of children and young people who seek refuge (Hodes et al., 2008; Keles et al., 2018). Families also experience disruption through this process, and separation from parents is a risk factor for children and adolescents' mental health (Derluyn et al., 2009). Psychosocial factors such as the vulnerability of exposure to traumatic events, the circumstances in the resettlement country, acculturation preferences, and social support, among others, can affect the mental health of these vulnerable individuals. Therefore, it is essential to look at the migration experience of these children and youth as a dynamic and meaningful process that starts before arrival in the country of resettlement and continues throughout their lives.

According to the Protocol Relating to the Status of Refugees, refugees are individuals who are forced to flee their home countries due to persecution, war, or violence (United Nations [UN], 1967). In lieu, the term forced migration is used more generally to refer to the involuntary movement of people away from their homes due, for instance, to persecution, war, violence, human rights violations, and natural disasters (International Organization for Migration, 2022). On the other hand, an asylum-seeker is an individual who has lodged an asylum claim (i.e., seeking refugee status) but whose application for protection is under assessment. Accompanied asylum-seeking children (ASC) are children and young people who claim asylum along with a parent or legal guardian. However, unaccompanied asylum-seeking children (UASC) undergo this process alone or without a parent or

legal guardian.

In this thesis, the term child is used to refer to a person below the age of 18 years. Moreover, concurring with the UN's definition of youth (1996), the terms youth and young refer to young adults ages 18 to 24. Young individuals, ages 18 to 24, were included in this study since, from a developmental perspective, they are still developing neurologically. The human brain (i.e., particularly the prefrontal cortex) continues to mature until age 25, and several factors have been considered to affect young individuals' brain development; for instance, physical, financial, and psychological stress (Arain et al., 2013). Consequently, traumatic events and migration-related hassles can affect forced migrant children and youth fleeing to Iceland in substantial ways.

1.1 Iceland

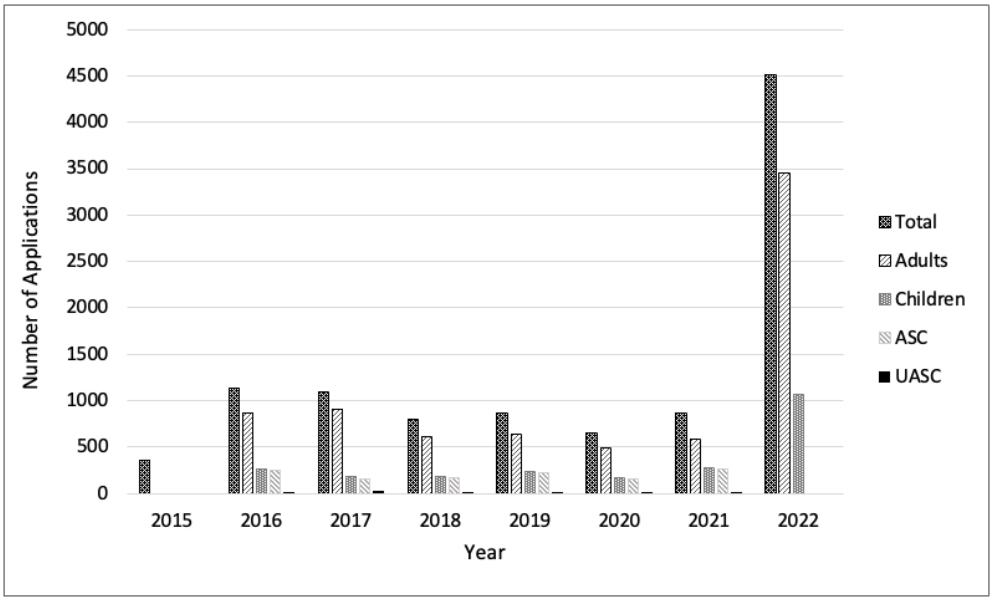
In 2015, countries in the Nordic and Baltic European region experienced a marked increase in refugees, asylum-seekers, and stateless people. This so-called refugee crisis led countries such as Denmark, Finland, Norway, and Sweden to amend migration policies that thwarted the influx of refugees migrating into these countries (Hagelund, 2020). Consequently, other countries in Northern Europe, such as Iceland, Latvia, and Lithuania, experienced a sharp and steady increase in asylum applications (UNHCR, 2018; UNHCR, 2019).

Iceland is the least populated country in Northern Europe; however, in 2017, Iceland had the highest number of asylum seekers per 10,000 inhabitants (i.e., 31.5) compared to other countries in the Northern European region, followed by Sweden (i.e., 22.2) (UNHCR, 2018). In 2020, while the Covid-19 pandemic stalled the movement of people across borders, Iceland remained the forerunner in the number of asylum-seekers per capita compared to other members of the Organization for Economic Co-operation and Development (Lindahl, 2021).

In 2022, 4,518 individuals applied for asylum in Iceland, most of which came from Ukraine (2,345), followed by Venezuela (1,199) and Palestine (232). In contrast, 354 asylum applications (i.e., from adults and children) were filed in 2015, indicating that asylum applications increased by 1,176% between 2015 and 2022

(see Figure 1). Furthermore, between 2016 and 2022, approximately one-fourth of the applicants were children (25%), predominantly traveling accompanied (i.e., around 18 UASC per year between 2016 and 2021) (see Figure 1) (Directorate of Immigration, n.d.).

Figure 1. Number of Asylum Applications Between 2015 and 2022.



Note. Values are missing for applications from children in 2015 and from UASC in 2022.

Migrants moving to Iceland face unique challenges. Iceland is a small remote island in the North Atlantic Ocean, and its geographical location makes it hard to reach. Besides, Icelandic is a complex language, and few people worldwide speak it, making it difficult and less desirable to learn (Thordardottir & Juliusdottir, 2013). These circumstances require studying the extraordinary difficulties children and youth seeking refuge face when moving to Iceland. Likewise, these same challenges may also be faced by those seeking refuge in other countries in Northern Europe, which share similar characteristics as Iceland.

1.1.1 The Asylum Process

When people seek asylum in Iceland, they can apply for asylum with a border guard at any border point in Iceland or the reception center for applicants for international protection. Once an asylum application is submitted, the Directorate of Immigration

registers the applicant and assesses whether another country is responsible for the application according to the Dublin Regulation. Once the application is registered, the applicant is placed in an accommodation facility. If Iceland is responsible for processing the application, then the Directorate of Immigration continues the application's assessment (this process might take up to 6 months) (UNHCR, n.d.). The immigration authorities also interview applicants as part of the application procedure. During this interview, applicants give a narrative account of their background, life experiences, and reasons for fleeing their countries and seeking asylum in Iceland.

The asylum interviews can be difficult, especially for traumatized individuals (Schock et al., 2015). Language is another factor that adds difficulty to the asylum interview, as they are often conducted with interpreters in the second language (or sometimes third language) of the interpreter, applicant, and even the interviewer. During these interviews, valuable information can be misunderstood and misinterpreted, making it even harder for immigration authorities to appreciate the applicant's personal story and trajectory (Kirmayer, 2007). The context of these interviews creates a lack of trust, which causes stress and makes regulation of affect and search for memory more difficult. Additionally, the examination and interpretation of the applicant's claims occur most often without shared cultural background knowledge, which affects the credibility of the applicant's personal story and motivation for seeking refuge (Kirmayer, 2007).

Waiting for the refugee application to be processed can also be highly stressful (Ryan et al., 2008). For instance, children and young forced migrants in Iceland have expressed distress about waiting for a decision on their asylum claim and worry about their futures. They also felt ignored during the asylum process as they could not express their opinions on matters relevant to them (e.g., the application process and their related feelings) (Gudmundsdóttir et al., 2018).

1.1.1.1 Child-Friendly Asylum Process

In Iceland, an attempt has been made to create a child-friendly asylum process for UASC. Therefore, in collaboration with the Directorate of Immigration, specialized

forensic interviewers conduct asylum interviews with unaccompanied children at Barnahus. Barnahus, or Children's House, is a child-friendly multidisciplinary center for child abuse victims run by the Icelandic National Agency for Children and Families. Iceland developed and adopted the Barnahus model in 1998, inspired by the child advocacy center model that originated in the United States in response to child abuse. The main objectives of the Barnahus model are to facilitate the legal process, to prevent the revictimization of children, and to ensure that children receive the necessary support and treatment interventions (Johansson et al., 2017). Currently, accompanied children and young adults claiming asylum in Iceland are still interviewed by the Directorate of Immigration. In a few cases, accompanied children are interviewed at Barnahus, for instance, when there is suspicion of abuse or human trafficking. However, there is no information regarding the impact of these asylum interviews on the mental well-being of children and youth. However, for adult forced migrants, asylum interviews can prove challenging and potentially cause post-traumatic intrusions in those already traumatized (Schock et al., 2015).

Forced migrant youth face additional challenges related to the asylum process not met by other migrant groups; for instance, undergoing age assessment, placement in low-support facilities, and risk of asylum refusal (Jakobsen et al., 2017). For a group of children and young people seeking asylum in Iceland, for example, reception facilities were restrictive in everyday life, they experienced limited access to extracurricular activities, and they expressed a lack of care and support (especially those who traveled alone to Iceland) (UNICEF, 2019).

The prevalence of mental health problems among asylum-seeking and refugee children and youth is considerably higher than among non-immigrant children and youth (Kien et al., 2019). Which might be influenced by the traumatic or stressful life events (SLEs) this vulnerable group of children and youth encounters in the home country, during migration, or in the country of resettlement (Fazel et al., 2012; Kien et al., 2019). For refugee youth, trauma and forced migration add stress to the already complex process of adapting to and learning a new culture (Buchanan et al., 2018).

1.2 Stressful Life Events, Mental Health, and Well-being

Many forced migrant children and youth face complex challenges and are exposed to SLEs throughout their migration experience, including war-related violence, abuse, and exploitation. Children and youth who travel alone report experiencing more SLEs than those who travel accompanied (Jakobsen et al., 2014; Müller et al., 2019). Being female has also been related to an increased risk of exposure to gender-related stressful experiences, such as sexual violence (Vu et al., 2014). However, for children and youth on the move along Mediterranean migration routes, males are at a greater risk of abuse and exploitation than females (Bartolini & Zakoska-Todorovska, 2020). This exposure to traumatic events, flight, and resettlement demands can negatively affect refugee youth's mental health and well-being (Scharpf et al., 2021).

Exposure to SLEs has been linked to mental health problems in children and young adults in general (Asgeirsdottir et al., 2011; McKay et al., 2021). Additionally, being from an immigrant background is related to an increased vulnerability to developing mental health issues. For instance, non-European migrant children and adolescents exhibit more emotional and behavioral problems than their native European peers (Belhadj Kouider et al., 2014). Likewise, when compared to non-refugee populations, refugee and asylum-seeker children have higher rates of post-traumatic stress disorder (PTSD), anxiety, depression, and attention deficit disorder (ADHD) (Blackmore et al., 2019). Unfortunately, the mental health problems of this population do not significantly change over time (Jensen et al., 2019; Vervliet et al., 2014).

Although research has focused on SLEs and consequent mental health problems of children and young refugees and asylum-seekers, these young individuals are also capable of experiencing positive well-being following trauma and migration (Doná & Young, 2016). Many forced migrant children and youth do well despite exposure to stressors and can cope with difficulties and challenges associated with acculturation. Therefore, experiences post-migration may be better predictors of mental health and sociocultural adaptation than events occurring pre-migration. Long-term research with a group of young Middle Eastern refugees in Denmark

revealed that factors related to life post-migration (e.g., school involvement, having Danish friends, language proficiency, and mother's education level) were essential for healthy long-term adaptation and in reducing long-term psychological problems following traumatic events related to war and other forms of organized violence (Montgomery, 2010; Montgomery, 2011).

Social inclusion and exclusion experiences in the resettlement country can significantly impact young refugees' psychological well-being (Correa-Velez et al., 2010). Similarly, for refugee children in Iceland, positive peer and community attitudes towards migrants are crucial for adaptation (Ottósdóttir & Wolimbwa 2011). Furthermore, psychosocial factors such as living with parents at home, greater perceived school performance, and subjective social status, among others, are also related to the well-being of youth with refugee backgrounds (Correa-Velez et al., 2010). These children and youth demonstrate resilience and cultural competence (i.e., the ability to function successfully in cultural settings other than their own), which play a crucial role in their adaptation after migration (Montgomery, 2011; Safdar et al., 2021).

Resilience refers to the process and outcome of effectively adapting to difficult or traumatic life events, mainly through mental, emotional, and behavioral flexibility and adaptability to external and internal demands (American Psychological Association, n.d.). Individual, personal, community, cultural, and contextual factors can impact resilience (Ungar et al., 2007). Several factors have been linked to resilience among refugee children; social networks and family resources enhance resilience, while ongoing stress and discrimination undermine it (Montgomery, 2011). Factors contributing to the protection of the mental health of refugee children are, for instance, social support (from peers and community), school (e.g., feeling accepted and good academic performance), family connectedness, and integrative acculturation (Scharpf et al., 2021). In this respect, the acculturation preferences of children and young forced migrants can also impact the ways they cope with stress and their subsequent adaptation.

1.3 Acculturation and Adaptation

Part of the migration experience of forced migrant children and youth involves adopting various strategies to successfully adapt to living interculturally in a new society (Berry et al., 2006). Three types of adaptation have been recognized: psychological, sociocultural, and intercultural. Psychological adaptation is related to mental health and feelings of well-being after coping with acculturative stresses. Sociocultural adaptation refers to the ability to "be part of" or manage socio-culturally in the larger society (Ward & Kennedy, 1993). Lastly, intercultural adaptation involves intercultural relations and refers to how well individuals relate to one another in a multicultural society. Including likes, dislikes, and behavior (i.e., acting on these inclinations) (Berry & Ward, 2018).

Adaptation arises as a consequence of acculturation and results from acculturative changes occurring over time (Berry & Sam, 2018). Psychological and socio-cultural acculturation have been defined as a process where psychological and cultural changes occur following contact with another cultural group (Berry et al., 2011). Not all individuals or groups experience acculturation the same way, and differences have been found in how people seek to engage in this process. These variations have been labeled acculturation strategies. Four strategies have been identified to explain how individuals and groups deal with two main issues: maintaining their heritage culture and seeking interaction with the larger society (Berry, 1997) (see Table 1).

Table 1. Acculturation Strategies.

Acculturation Strategies		
Strategy	**Heritage Culture Maintenance**	**Interaction with Mainstream Culture/Larger Society**
Assimilation	*Lacks interest or opportunity*	*Seeks interaction*
Integration	*Maintains heritage culture*	*Seeks interaction*
Separation	*Maintains heritage culture*	*Lacks interest or opportunity*
Marginalization	*Lacks interest or opportunity*	*Lacks interest or opportunity*

Several methods have been used to assess immigrants' acculturation strategy preferences, most notably the one-statement, two-statement, and four-statement approaches (Sam & Ward, 2021). The one-statement approach employs a bipolar

scale ranging from heritage culture preservation to mainstream culture adoption. The two-statement method (also known as Berry's two-dimensional model) uses two scales (i.e., heritage culture orientation and mainstream culture orientation) to create four acculturation strategies by classifying individuals as high or low on these scales using the scales' midpoints or medians as cut-points. Finally, using separate parallel items, the four-statement approach independently assesses orientations toward the four acculturation strategies. Critics have claimed that the two-statement approach makes comparisons across studies challenging, given that cut-points tend to vary across samples (Schwartz et al., 2010). However, Berry's two-dimensional model has been repeatedly proven to be a valid and useful method for assessing acculturation (Sam & Ward, 2021).

The acculturation process is dynamic and complex and can be a stressful experience for many reasons. The acculturation literature recognizes that acculturative stress can interfere with this process (Rudmin, 2009). Acculturative stress refers to a stress reaction that follows life events grounded in the acculturation experience (Berry, 2006). It occurs as a response to challenges in negotiating and adjusting to perceived cultural incompatibilities and differences between and within the heritage and mainstream cultures (Rodriguez et al., 2015). Adult and adolescent immigrants can experience acculturative stress as they navigate through the process of acculturation (Rodriguez et al., 2015).

Various factors can influence the acculturation process. The length of residency in the county of resettlement has been connected to how young immigrants acculturate and adapt, with integration being more common among young immigrants who have been in the country of resettlement for a longer time (Berry et al., 2006). Furthermore, Berry et al. (2006) suggest that as their time of stay rises, young immigrants will exhibit greater psychological and socio-cultural adaptation. Other factors that might affect acculturation include, for instance, immigrants' personal characteristics, the country of origin, socioeconomic situation and capital, the resettlement country and local community, and fluency in the new language (Schwartz et al., 2010). Language is essential for acculturating individuals, and difficulties acquiring the resettlement country's language can make this process

even harder. Being unable to speak the resettlement country's language affects refugee youth's involvement in activities of daily living (Choy et al., 2021) and their access to mental health services (Ellis et al., 2011). Acquisition of the resettlement country's language can also contribute to the sociocultural adjustment of refugees (El Khoury, 2019)

A shared language is part of the constitution of national unity, and migrants with other languages (or who have not learned the language of the country of resettlement) might be considered a risk to national identity and experience discrimination (Liu et al., 2014). Perceived discrimination is a common underlying experience for refugee youth and has also been linked to poor mental health outcomes (Montgomery & Foldspang, 2008). Furthermore, marginalization (see Table 1) amplifies the effects of discrimination on the well-being of second-generation immigrants (Berry & Hou, 2017).

Concerning acculturative stress, the pursuit of integration is considered the least stressful, while marginalization is regarded as the most stressful. However, assimilation and separation fall between the two, with one or the other being less stressful (see Table 1) (Berry, 2006). Correspondingly, young immigrants' acculturation preferences can impact their mental health. In this regard, integration is linked to better mental health outcomes and marginalization to poorer mental health outcomes (Berry et al., 2006; EL-Awad et al., 2021).

1.3.1 Integration

For immigrants, becoming bicultural is one way of successfully coping with acculturative stress (Schwartz et al., 2010). The concepts of biculturalism and integration are equivalent and refer to individuals' orientation toward the dominant (i.e., mainstream) and the heritage cultures (see Table 1). Bicultural individuals are able to find a balance between adopting mainstream cultural practices and interacting with the larger society while maintaining their heritage culture. Integration is the most advantageous acculturation strategy for well-being, followed by the assimilation and separation strategies, with comparable levels of well-being. Conversely, the marginalization strategy is related to the lowest levels of well-being (see Table 1) (Berry & Hou, 2017; Yoon et al., 2013). A meta-analysis on

biculturalism and adjustment found that biculturalism was positively related to psychological and sociocultural adaptation (Nguyen & Benet-Martínez, 2013). This phenomenon has been referred to as the integration hypothesis.

For immigrant youth across countries, integration positively relates to their psychological and sociocultural adjustment (Berry et al., 2006; Nguyen & Benet-Martínez, 2013). However, during the past five decades, the literature on acculturation has evolved (Sam & Ward, 2021). A recent meta-analysis by Bierwiaczonek and Kunst (2021) suggests that the role of acculturation in adaptation may be more limited than previously implied as it overlooks contextual factors such as discrimination, language barriers, and social support to understand minority-group members' adaptation. Despite this criticism, recent studies indicate that the integration acculturation strategy helps young immigrants develop resilience and improves mental health (Wu et al., 2018; EL-Awad et al., 2021). However, research is lacking regarding the preferred acculturation strategies by children and youth who enter the resettlement country as asylum-seekers and the relationship between their strategy preferences and mental health (Nguyen & Benet-Martínez, 2013; Sheikh & Anderson, 2018; Schmitz & Schmitz, 2022). Apart from acculturation strategies, social support also contributes to the mental health of immigrant youth (Sirin et al., 2013).

1.4 Social Support

The type of support children and young asylum-seekers receive in the country of resettlement can impact their psychological well-being, both in constructive and negative ways. Perceived social support, in general, is positively associated with the well-being of children and adolescents (Chu et al., 2010). Equally, support from family and peers contributes to the well-being of children and youth who seek refuge (Correa-Velez et al., 2010; Oppedal & Idsoe, 2015). Social support benefits young refugees' mental health and has an indirect effect by boosting competencies that help these young individuals deal with discrimination (Oppedal & Idsoe, 2015). Inversely, for adolescent migrants, factors such as low social support and isolation (e.g., marginalization, see Table 1) are related to poor psychological well-being

(Berry et al., 2006; Oppedal & Idsoe, 2015). Likewise, lesser social support is related to mental health symptoms in UASC (Sierau et al., 2019).

For refugee youth in Australia, experiences of social inclusion or exclusion (e.g., being socially valued or discriminated against and excluded due to accent, ethnicity, religion, or immigrant status) significantly impact their well-being in the first three years after settlement. The larger social milieu in which these young individuals live is crucial for positively reinforcing social value, belonging, and the ability to participate in and contribute to society (Correa-Velez et al., 2010).

Support from families, schools, and peers helps promote resilience in children exposed to violence and SLEs (Yule et al., 2019). For refugee minors and adolescents who seek asylum, social support positively affects their well-being by reducing rates of symptoms of depression and PTSD (Klineberg et al., 2006; Montgomery, 2011; Reavell & Fazil, 2017). For immigrant adolescents, social support also helps prevent the development of mental health symptoms related to acculturative stress (Sirin et al., 2013), contributing to their adaptation.

Parental social support can help prevent the potential effects of trauma exposure (Asgeirsdottir et al., 2010). Similarly, support from mothers, extended family, and the community can protect children's vocabulary development against adverse conditions (Baydar et al., 2014). A meta-analysis on resilience in children exposed to violence suggests that warm and loving interactions with parents, family members, friends, and school personnel can offer children crucial emotional and practical support while boosting their self-worth. The authors conclude that supportive interactions are essential for all children but may be particularly important for those who have experienced violence (Yule et al., 2019). Likewise, peer social support helps increase refugee adolescents' feelings of self-worth and peer social acceptance (Kovacev & Shute, 2004), and social support from teachers and peers encourages the integration of immigrant adolescents (Tartakovsky, 2012).

As shown above, various factors can affect forced migrant and immigrant children and youth in positive and negative ways. These young individuals encounter protective and risk factors that can significantly impact their lives throughout their migration journeys.

1.5 The Migration Experience - Risk and Protective Factors

Migration research has demonstrated that child and youth migration is a complex process arising in response to social and economic changes occurring at a global scale (Veale & Doná, 2014). As such, the migration experiences of children and youth forced migrants can be seen as s a dynamic process, affected by internal and external factors, which starts before their journeys begin, extends beyond the country of resettlement, and continues throughout their lifetimes. Therefore, it is essential to acknowledge the risk and protective factors associated with this population's mental health and well-being throughout this process (see Table 2).

Table 2. Risk and Protective Factors Associated with Mental Health and Well-being Throughout the Different Stages of Migration.

Factors associated with mental health and well-being		
Migration experience	**Risk**	**Protective**
Pre-migration	*Forced migration (UNHCR, 2022)* *Traumatic experiences and SLEs (Jakobsen et al., 2014; Jensen et al., 2015; Scharpf et al., 2021; Vervliet et al., 2014)* *Lack of opportunities to play due to war, parents' exposure to torture (Montgomery, 2011)*	*Supportive relations (family, peers, school) and self-regulation (Yule et al., 2019)*
Flight	*Dangerous journey (Müller et al., 2019)* *Traveling unaccompanied (Jakobsen et al., 2014;* Müller et al., 2019) *Being a young male and traveling alone (Bartolini & Zakoska-Todorovska, 2020)* *Extended exile, long-term displacement, and dwelling in refugee camps for years and decades at a time (Hyndman & Giles, 2017)*	*Traveling accompanied (Bean et al., 2007a)*
Post-migration	*Acculturation strategies (Berry & Hou, 2017; Nguye n & Benet-Martínez, 2013; Yoon et al., 2013)* *Acculturative stress (Berry, 2006; Rodriguez et al., 2015; Rudmin, 2009)* *Daily stressors (Vervliet et al., 2014)* *Language proficiency (Choy et al., 2021)* *Discrimination (Berry & Hou, 2017)* *Lack of social support (Bronstein & Montgomery, 2011)* *The asylum process and asylum status (Kirmayer, 2007; Nielsen et al., 2008; Schock et al., 2015)*	*Social inclusion (Correa-Velez et al., 2010)* *Positive peer and community attitudes (Ottósdóttir & Wolimbwa, 2011)* *Family structure (Correa-Velez et al., 2010)* *Integration or biculturalism (Berry et al., 2006; EL-Awad et al., 2021; Nguyen & Benet-Martínez, 2013; Schwartz et al., 2010; Wu et al., 2018)* *Social support (Chu et al., 2010; Klineberg et al., 2006; Oppedal & Idsoe, 2015; Reavell & Fazil, 2017)* *Language proficiency (Ottósdóttir & Wolimbwa, 2011)*

During pre-migration, forced migrant children and youth often face SLEs, such as exposure to war and violence, family loss, and separation, which can affect their mental health and well-being (see Table 2). There is, however, a lack of research regarding pre-migration protective factors for this particular population. Still, for children exposed to violence, supportive relationships with parents, family members, peers, and school staff and self-regulation (i.e., the competence to manage emotions, impulses, and behavior) can foster resilience (Yule et al., 2019).

Throughout flight (i.e., migration), many forced migrant children and youth encounter dangerous journeys. Some experience extended exile, long-term displacement, and even live in refugee camps for long periods. For these children and youth, psychological symptoms development is related to SLEs experiences. Still, traveling accompanied is a protective factor during flight, as those traveling alone, particularly males, are more vulnerable to abuse and exploitation (see Table 2).

The process following flight (post-migration) is complex and can continue throughout the lives of these individuals. Once in the resettlement country, the process of acculturation takes place. Acculturation strategy preferences and acculturative stress can affect mental health. Furthermore, psychosocial factors such as proficiency in the resettlement country's language, social support, daily stressors, discrimination, and the asylum process are also related to mental health outcomes and well-being. Still, for this population, finding a balance between preserving the heritage culture and seeking interaction with the larger society (i.e., integration or biculturalism) can increase sources of social support, subsequently benefiting their mental health and adaptation (see Table 2).

Beyond this scope, it is essential to recognize the unique challenges those moving to Iceland face. Iceland is a small country with a mainly homogeneous population, and its geographical location makes it hard to reach. Additionally, Icelandic is not spoken elsewhere globally, which raises an additional challenge for immigrants. These unique characteristics require studying the extraordinary difficulties that children and young forced migrants face when moving to such a remote area of the world. However, little is known about their migration experiences in the Icelandic context.

1.6 Research in Iceland

Most research on refugees and asylum seekers in Iceland has used qualitative methodology and has been conducted with adult participants (Harðardóttir et al., 2005; Ingvarsson et al., 2016) or with few children and young participants (Guðmundsdóttir et al., 2018; Ragnarsdóttir, 2020; Ottósdóttir & Bragadóttir, 2021)

Regarding refugee children in Iceland, the literature suggests that factors such as illiteracy, interrupted schooling, and learning Icelandic are challenging for this population (Ragnarsdóttir, 2020). Moreover, Icelandic language proficiency and peer and community attitudes toward migrants are essential to their adaptation (Ottósdóttir & Wolimbwa, 2011).

Children and youth who seek asylum in Iceland report a lack of opportunity to express their opinions regarding the asylum application process and their rights in Iceland (Gudmundsdóttir et al., 2018). Moreover, they report having received limited information upon reception, found reception facilities restrictive in daily life, experienced reduced access to health care, and UASC expressed a lack of care and support (UNICEF, 2019). A qualitative study of seven unaccompanied teenage boys who sought refuge in Iceland revealed that some were not offered the opportunity to attend school or Icelandic courses upon arrival (Ottósdóttir & Bragadóttir, 2021). Most of the boys expressed the importance of starting school as soon as possible and felt it should be available during the waiting period. Moreover, the study revealed that these boys were not given enough opportunities to engage in extracurricular activities or socialize with peers, negatively affecting their well-being and adjustment (Ottósdóttir & Bragadóttir, 2021).

As a result of the ample growth in the number of forced migrant children and youth entering Iceland and other countries globally, there is an increased interest in this population. Research is lacking concerning our understanding of the psychological lives of forced migrant children and youth moving to Iceland and how psychosocial factors affect their mental health. Moreover, there is a gap in understanding these individuals' experiences dynamically, which might help distinguish the changes that arise with the passage of time. Moving to Iceland is not an easy task, and the migration experiences of these children and youth deserve to be seen as a meaningful process.

2 Aims and Hypotheses

2.1 General Aim

Against this background, the study detailed in this doctoral thesis addresses gaps in the literature by exploring the resettlement experience of forced migrant children and youth in Iceland. The study examines a range of factors involved in the adaptation of these young individuals, including their migration journeys, social support systems, acculturation preferences, and mental health.

2.2 Paper I – Aims and Hypotheses

In paper I, the aim was to identify the psychosocial factors (e.g., reasons for fleeing, social support, the vulnerability of exposure to SLEs, and Icelandic language proficiency) involved in the migration journeys of participants. The study also examined how psychosocial factors across the different migration phases (i.e., pre-flight-post) play a role in these young individuals' mental health. Additionally, the study aimed to capture changes in the relationship between adaptation and mental health across two points in time. In paper I, the following hypotheses were put forward:

1. Traumatic events act as push factors urging participants to flee their home countries.

2. Traveling accompanied (i.e., by a parent or family member) to Iceland will be positively and significantly related to higher levels of perceived social support.

3. The Internet and social media will help inform these young individuals about the country of resettlement (i.e., Iceland) and facilitate connections with family members living abroad.

4. High levels of perceived social support (especially from parents), traveling accompanied, and living longer in Iceland will be significantly and positively related to higher levels of perceived Icelandic proficiency.

5. Psychosocial factors (i.e., contact with family abroad, higher levels of perceived social support from parents and peers, higher levels of perceived Icelandic proficiency, and an easier asylum experience) and lower scores on the PTSD symptoms scale will be significantly related to higher levels of mental well-being.

2.3 Paper II – Aims and Hypotheses

Paper II aimed to explore the prevalence of SLEs amongst participants and the role of factors (e.g., gender) that affect exposure to SLEs. The study also assessed the psychological symptoms (i.e., PTSD, anxiety, depression, and externalizing symptoms) of participants and compared symptoms' prevalence between those who traveled accompanied and unaccompanied to Iceland. Lastly, this study examined the role exposure to SLEs, and parental and peer support, played in psychological symptoms development. The following hypotheses were put forward in paper II:

1. There will be a high prevalence of SLEs among participants, with those who traveled alone to Iceland reporting more SLEs experiences than those who traveled accompanied.

2. High levels of psychological symptoms will be reported by participants, with those who traveled alone to Iceland reporting significantly higher levels of psychological symptoms than those who traveled accompanied.

3. A greater number of SLEs will be significantly and positively related to higher levels of psychological symptoms.

4. Less perceived parental and peer support will be significantly and negatively related to higher levels of psychological symptoms.

2.4 Paper III – Aims and Hypotheses

Paper III aimed to examine the acculturation strategies preferences of participants and their relationship to mental health outcomes (i.e., PTSD, depression, anxiety symptoms, and externalizing symptoms). Lastly, the study examined whether there was support for the integration hypothesis in Iceland; that is, integration is related to better mental health outcomes, while marginalization is related to worse mental health outcomes. The following hypotheses were put forward in paper III:

1. Most participants will prefer the integration strategy.
2. Those who prefer integration will report better mental health outcomes than those who favor other acculturation strategies.
3. The least preferred strategy will be marginalization.
4. Those who favor marginalization will report worse mental health outcomes than those favoring other acculturation strategies.
5. The association between acculturation strategy and mental health outcomes will be stronger for those living in Iceland for more than 18 months than for those living in Iceland for less than 18 months.

3 Materials and Methods

The study, conveyed in the three papers presented in this doctoral thesis, consisted of assessment interviews with participants, and self-assessment measures administration, at two time points.

Data regarding sociodemographic information, perceived peer and parental social support (items from the Perceived Parental Support scale and peer version [PPS]), acculturation strategy preferences (items from the Vancouver Index of Acculturation [VAI]), and mental well-being (items from the short version of the Warwick–Edinburgh Mental Wellbeing Scale [SWEMWBS]) were collected via face-to-face interviews. Additionally, the following self-assessment measures were administered to participants following these interviews: The Stressful Life Events Checklist (SLEs Checklist), the Reactions of Adolescents to Traumatic Stress (RATS) questionnaire, the Hopkins Symptom Checklist-37 for refugee adolescents (HSCL-37A) (see Table 3).

The first assessment interview (time point one or TP1) occurred soon after individuals agreed to participate in the study. The second assessment interview (time point two or TP2) took place approximately eight months following the first interview (M = 7.93, SD = .99).

Ethical approval was granted by the National Bioethics Committee and the Data Protection Authority (VSN-20-005 and VSN-20-005-V1).

A summary of methods for each of the three papers presented in this thesis can be seen in Table 3, which provides an overview of participants, measures (and main variables), procedures, and statistical analysis. Only the first paper contains an analysis of the data from time point two.

Table 3. Overview Methods for Papers I, II, and III

Overview			
	Paper I	**Paper II**	**Paper III**
Participants	*Time point one: Children and youth who sought asylum in Iceland between 2016 and 2020, N = 75, age: M = 19.7, SD = 3.0* *Time point two: Children and youth who remained in the study, N = 43, age: M = 20.2, SD = 3.1*	*Time point one: Children and youth who sought asylum in Iceland between 2016 and 2020, N = 75, age: M = 19.7, SD = 3.0*	*Time point one: Children and youth who sought asylum in Iceland between 2016 and 2020, N = 75, age: M = 19.7, SD = 3.0*
Measures Main variables	*Two assessment interviews and self-report measures* *Traveling (un)accompanied, perceived parental support (i.e., PPS), perceived peer social support (i.e., PPS peer version), SLEs Checklist, reasons for migration, use of the internet and social media to inform decisions on where to migrate, contact with family members abroad (and communication mediums use to stay in touch), perceived language proficiency, PTSD symptoms (i.e., RATS), and psychological well-being (i.e., SWEMWBS)*	*Assessment interview and self-report measures* *SLEs (i.e., SLEs Checklist), traveling (un)accompanied, gender, PTSD symptoms (i.e., RATS), psychological symptoms (i.e., HSCL-37A), perceived parental support (i.e., PPS), and perceived peer social support (i.e., PPS peer version)*	*Assessment interview and self-report measures* *Acculturation preferences (i.e., VAI), mental health outcomes (i.e., RATS, HSCL-37A), and length of time living in Iceland*
Procedure	*Socio-demographic information and data concerning some of the main variables and self-assessment measures (i.e., PPS, PPS peer version) were collected via face-to-face interviews at two time points, approximately eight months apart (M = 7.93, SD = .99).* *The RATS was administered*	*Socio-demographic information and data from self-assessment measures (i.e., PPS, PPS peer version) were collected via face-to-face interviews. Self-report measures (i.e., SLEs checklist, RATS, and HSCL-37A) were administered to*	*Socio-demographic information and data from self-assessment measures (i.e., PPS parent version, PPS peer version, and VAI) were collected via face-to-face interviews. Self-report measures (i.e., RATS, HSCL-37A) were administered to participants following the face-to-face*

	to participants following the face-to-face interviews at time points one and two. The SLEs checklist was administered to participants at TP1, and questions from the SWEMWBS were asked via face-to-face interviews only at TP2	*participants following the face-to-face interviews*	*interviews*
Data analysis	*Descriptive analysis, Pearson correlations, Spearman correlations, independent samples t-test, paired sample t-test, multiple linear regression, and logistic regression*	*Descriptive analysis, Pearson correlations, and multiple linear regression*	*Descriptive analyses, One-way analysis of variance (ANOVA), and two-way ANOVA*

Note. HSCL-37A: Hopkins Symptom Checklist-37 for refugee adolescents. PPS: Perceived Parental Support Scale. RATS: Reaction of Adolescents to Traumatic Stress questionnaire. SLEs Checklist: Stressful Life Events Checklist. SWEMWBS: Short version of the Warwick–Edinburgh Mental Wellbeing Scale. VAI: Vancouver Index of Acculturation.

3.1 Participants

A total of 75 individuals participated in the first assessment interview (TP1), 50 males and 25 females (M = 19.7, SD = .96). Of the 75 participants, 43 agreed to be interviewed a second time (TP2), 25 males and 18 females (M = 20.16, SD = 3.09). Demographic information about the sample can be seen in Table 4.

Table 4. Sociodemographic Characteristics of Study Participants.

Sociodemographic information		
	First assessment interview (TP1) *N* = 75, *n* (%)	**Second assessment interview (TP2) *N* = 43, *n* (%)**
Age		
Age at interview *M* (*SD*)	*19.7 (3.0)*	*20.2 (3.1)*
Gender, *n* (%)		
Male	*50 (66.7)*	*24 (55.8)*
Female	*25 (33.3)*	*19 (44.2)*
Traveled (un)accompanied, *n* (%)		
Alone	*37 (49.3)*	*18 (41.9)*
Accompanied	*38 (50.7)*	*25 (58.1)*
Asylum application status, *n* (%)*		
Protection/refugee status	*22 (29.3)*	*30 (69.8)*
Subsidiary protection	*19 (25.3)*	-
Humanitarian permit	*4 (5.3)*	*10 (23.3)*
Appeal	*2 (2.7)*	-
In progress	*27 (36.0)*	*1 (2.3)*
Special connection	*1 (1.3)*	-
Citizenship	-	*1 (2.3)*
Negative	-	*1 (2.3)*
Religion, *n* (%)		
Muslim	*40 (54.1)*	*24 (55.8)*
Christian	*17 (23.0)*	*9 (21.0)*
Other**	*11 (14.9)*	*6 (14.0)*
Unaffiliated	*6 (8.1)*	*4 (9.3)*
Family in Iceland, *n* (%)		
Yes	*48 (64.0)*	32 (74.6)
No	*27 (36.0)*	11 (25.4)
Occupation, *n* (%)		
School/Icelandic course	*50 (66.7)*	*27 (62.8)*
Work	*24 (32.0)*	*15 (34.9)*
Attending school and work	*15*	*10*
Not in school and not working	*16*	*11*

Note. *Information from the DI at TP1 and from participants at TP2. **Santeria, agnosticism, Humanity, Jehovah's Witness, and personal religion.

As seen in Table 4, the mean age of participants during time point one was 19.7 years and 20.2 during time point two. According to data from the Directorate of Immigration, the mean age of participants when the asylum application was submitted was 18.2 (minimum age 11 and maximum age 24).

Participants came from 25 different countries. The countries most frequently represented were Kurdistan (*n* = 10), Somalia (*n* = 9), Afghanistan (*n* = 7), Iraq (*n* = 7), and Venezuela (*n* = 7). The remaining countries were Albania, Burkina Faso, Colombia, El Salvador, Gambia, Gaza, Ghana, Guinea, Iran, Nigeria, Pakistan, Palestine, Russia, Sudan, Syria, Tunisia, Turkey, Ukraine, Western Sahara, and Yemen. Additionally, one person was undocumented at birth (i.e., stateless). Over half of the participants practiced Islam religion (54.1% at TP1 and 55.8% at TP2), followed by Christianity (23.0% at TP1 and 21.0% at TP2). Most participants lived in the capital area.

Furthermore, 74.6% of participants had family members living in Iceland at the second time point, compared to 64.0% of participants at the start of the study (TP1). Work and school participation percentages remained almost identical between time points one and two (see Table 4).

3.2 Pilot Study

Before the start of the study, a pilot study took place to examine the structure of the study. Assessment interviews (along with self-assessment measures) were carried out with five volunteer participants: two adolescents (i.e., from Nigeria and Syria), one young adult (i.e., from Venezuela), one parent (i.e., from Syria), and one interpreter (i.e., from Morocco). After the pilot interviews, volunteers were encouraged to express their opinions regarding the interview structure, wording, and self-assessment measures. Volunteers provided valuable feedback and information that helped revise the content of some of the questions, and no comments were made against the self-assessment methods.

In addition to the pilot study, meetings were held with representatives from the Directorate of Immigration, the Icelandic National Agency for Children and Families, the social services of three municipalities (Reykjavik, Hafnarfjörður, and the Peninsula of Reykjanes), the Red Cross, and UNICEF, respectively. These meetings afforded the researcher information regarding the study population and feedback concerning the research design and the assessment interview structure.

3.3 Procedures

A declaration of cooperation between the study's principal researchers (i.e., the PhD student and the thesis supervisor) and the Directorate of Immigration (DI) was signed before the study began. It specified that the Directorate of Immigration would provide the names of potential participants, contact information, and sociodemographic information (i.e., date of asylum application, date of birth, and application status). Moreover, multilingual interpreters signed confidentiality agreements and a contract with guidelines regarding their conduct during the assessment interviews.

Next, the Directorate of Immigration created a list of 288 potential participants. These were children and young adults (ages 13 to 24) who sought asylum in Iceland between 2016 and 2020 and were still living in Iceland when the information was gathered. Information letters were sent on behalf of the person responsible for the study (i.e., the thesis supervisor) to potential participants and their legal guardians, written in five different languages (i.e., Arabic, English, Farsi, Kurdish, and Spanish). These languages were selected as they were spoken by the primary groups of individuals seeking refuge in Iceland by 2020.

The information letter was intended to invite potential participants to participate in the study. The letter described the purpose of the research and asked them to reach the study's contact individuals (i.e., the PhD student and the thesis supervisor) by phone or email if they required additional information or did not wish to participate. Social workers also promoted the study amongst potential participants. Next, the principal researcher (i.e., the PhD student) contacted potential participants (via phone), who did not refuse participation, to answer questions and set up appointments. Phone calls were placed in random order, with the help of interpreters when required. Some potential participants did not answer phone calls, or phone numbers were disconnected, while others declined participation. Eventually, 20 participants refused participation, and 75 individuals partook in the study's first time point.

At the start of the first assessment interview, the principal researcher, and the interpreter (when required), met with participants (and children's legal guardians) at the appointed time and place that had been priorly arranged via phone. Most participants chose to meet at a private mental health clinic (organized by the principal researcher), followed by a coffeehouse, the participant's home, or a public library. The main researcher (along with the interpreter when necessary) read the informed consent form to participants (and children's legal guardians), which provided a detailed explanation of the study and its implications (e.g., freedom not to participate, confidentiality and anonymity, and the independence of the research from the immigration authorities). Participants' concerns and questions were addressed, and they were also told that they could refrain from answering questions and terminate participation at any time during the study. Eventually, all 75 participants (and children's legal guardians) signed the informed consent (only one individual refused involvement at this point in the study). Participants were assigned a number, and the key, with information about their names and corresponding numbers, was kept securely in a computer file at Reykjavik University's server. Interviews were not recorded as it was expected that fewer individuals would participate if they knew interviews were being taped. However, regarding open-ended questions, the interviewer wrote the participants' answers as accurately as possible. Moreover, assessment measures and collected data were kept safely at Reykjavik University (i.e., in a locked storage cabinet and secure server).

Recruitment and assessment interviews were carried out between July 2020 and November 2021. The first assessment interviews were conducted between August 2020 and March 2021 (i.e., TP1), and the second assessment interviews were conducted between May 2021 and November 2021 (i.e., TP2). Interpreters were present during these interviews when needed.

For the second interview, an attempt was made to contact all 75 participants. However, some participants could not be reached (i.e., phone numbers were disconnected, or they did not answer), and some refused participation (e.g., said

they were busy, did not have time, or did not wish to participate). As a result, 43 participants remained in the study during time point two.

The mean duration of the 118 face-to-face interviews (along with the time it took participants to complete the self-report measures) was 68.8 minutes (*SD* = 17.9). That is, 74.2 minutes (*SD* = 22.1) at time point one and 63.4 minutes (*SD* = 13.6) during the second time point. During time point one, 42.7% of the interviews were performed in English, 32.0% with the help of an interpreter, 22.6% in Spanish, and 2.7% in Icelandic. While 60.5% of the interviews during time point two were performed in English, 18.6% with interpreters, 18.6% in Spanish, and 2.3% in Icelandic.

3.4 Measures

The structure of the assessment interview was almost identical at time points one and two. However, some questions were omitted during the second interview (e.g., religious affiliation, country of origin, and reasons for leaving the home country). Moreover, the wording of some of the questions was modified to reflect changes from one point in time to the next (e.g., „...since the last time we met…“) or to reword the questions (e.g., from „tell me about your experience of seeking asylum in Iceland“ to „in general, how easy or difficult has it been for you to apply for asylum/refuge in Iceland?“). Changes were also made to the administered self-report measures; the Stressful Life Events Checklist (i.e., SLEs Checklist) was omitted during time point two, and the short version of the Warwick–Edinburgh Mental Wellbeing Scale (i.e., SWEMWS) was administered only during time point two.

Centrum '45 (https://www.centrum45.nl/) approved the use of all translations of the SLEs checklist, RATS, and HSCL-37A in the current study (Gerda Heslinga, personal communication, April 8, 2019).

The following section describes the procedures and measures used in papers I, II, and II (see Table 3). Participants were also asked additional questions (both multiple-choice and open-ended) not mentioned in these papers. These questions

were, for example, whether they participated in sports pre-migration and in Iceland (and which sports), where they lived and how they liked their living situation, how they rated their physical and mental health, whether they sought psychological support, and how much this support helped them.

3.4.1 Paper I

Sociodemographic information, questions regarding contact with family abroad, reasons for migration, how they first heard about Iceland, perceived Icelandic language proficiency, and the asylum process were asked via face-to-face interviews. The Perceived Parental Support (PPS) scale was used to measure participants' perception of parental and peer support (the questions of the PPS were administered via face-to-face interviews) (see Table 3). Studies have demonstrated the validity and reliability of the PPS (Kristjansson et al., 2010).

The RATS questionnaire was administered following the face-to-face assessment interviews at both time points. However, the SLEs Checklist was administered at time point one, while the SWEMWBS was administered at time point two (see Table 3).

The SLEs Checklist assesses whether an adolescent has experienced a traumatic event according to DSM-IV PTSD criteria (Bean et al., 2007b). The SWEMWBS and the RATS are valid and reliable tools for measuring mental well-being (Stewart-Brown et al., 2011) and post-traumatic stress reactions in diverse populations (Bean et al., 2006), respectively.

Although not included in paper I, participants were also asked open-ended questions regarding their experiences learning Icelandic and seeking asylum in Iceland (results are presented in this thesis).

3.4.2 Paper II

Sociodemographic information and questions from the perceived social support from parents and peers' scales (i.e., PPS) were collected via face-to-face interviews. Furthermore, the SLEs Checklist, the RATS, and the HSCL-37A were administered to participants following the face-to-face interviews (see Table 3). The validity and

reliability of the SLEs Checklist, RATS, and the HSCL-37A have been demonstrated with culturally diverse adolescent populations (Bean et al., 2006; Bean et al., 2007a)

3.4.3 Paper III

Socio-demographic information and questions from the acculturation measure, the VAI, were collected via face-to-face interviews. At the same time, the RATS and the HSCL-37A were administered following these interviews (see Table 3). The HSCL-37A's anxiety subscale, depression subscale, and externalizing cluster were also analyzed separately in this paper.

The VIA is a reliable, valid, and frequently used measure of acculturation (Testa et al., 2019). In order to measure acculturation strategy preferences, the mean scores of the heritage and mainstream subscales of the VAI were used to create four acculturation strategies subscales (see Table 1). The mean scores were chosen as the mean and median values of the two subscales were almost identical. The assimilation strategy subscale identified participants who were below the mean on the heritage subscale and equal to and above the mean on the mainstream subscale. The integration strategy subscale distinguished participants who were equal to, and above the mean, on both the heritage and the mainstream subscales. The separation subscale distinguished participants who were equal to and above the mean on the heritage subscale and below the mean on the mainstream subscale. And the marginalization strategy subscale distinguished participants who were below the mean on the heritage and mainstream subscales.

3.5 Statistical Analysis

Data were analyzed using IBM Statistical Package for the Social Sciences (SPSS), version 27. Descriptive analyses were conducted to evaluate demographic characteristics. As seen in Table 3, Pearson correlation, Spearman correlation, independent samples *t*-test, paired samples *t*-test, multiple linear regression, logistic regression, one-way analysis of variance (ANOVA), and two-way ANOVA were conducted to test hypotheses (see Aims and Hypotheses). Assumptions for all data analysis were examined and met.

4 Results

Results from the three papers this doctoral thesis is based on are presented below. Paper I explored psychosocial factors' involvement in the migration experience of participants and their role in mental well-being. Paper II examined the prevalence of SLEs, psychosocial factors' role in exposure to SLEs, and psychological symptoms' development. Paper III focused on examining acculturation strategies preferences, their relationship to mental health outcomes, and whether there was support for the integration hypothesis in Iceland.

4.1 Paper I

4.1.1 Sociodemographic Characteristics

As seen in Table 4, at time point one, over half of the participants had been granted protection or subsidiary protection, and 38.7% were still awaiting a decision concerning their asylum application. Also, half of the participants had traveled to Iceland accompanied by a parent or close family member (50.7%).

By the time the second assessment interview took place, participants had been living in Iceland for an average of over two and a half years (M = 32.63 months, SD = 13.69). Furthermore, 69.8% had received refugee status, followed by a humanitarian permit, and only one participant was still waiting for a decision on their asylum claim (see Table 4).

4.1.2 Social Support

Results from independent samples t-test (data from the first assessment interview) revealed that the participants who traveled alone to Iceland (n = 37, M = 12.27, SD = 5.75) experienced, on average, significantly less perceived parental support than those who traveled accompanied (n = 38, M = 17.03, SD = 2.83) ($t_{(52.205)}$ = -4.526, p < .001). However, perceived support from friends did not differ significantly between the two groups (alone, M = 14.51, SD = 4.21) (accompanied, M = 14.71, SD = 5.07) ($t_{(73)}$ = -.183, p = .855).

Paired sample *t*-tests compared perceived parental and peer support levels between the first and second assessment interviews. Results revealed that perceived parental support stayed unchanged between the first (N = 43, M = 15.0, SD = 5.0) and second assessment interview (N = 43, M = 15.8, SD = 4.4), $t_{(42)}$ = -1.23, p = .23. Similarly, no significant difference was found between participants' perceived level of peer support during the first (M = 14.8, SD = 4.6) and second time point (M = 15.4, SD = 3.8) $t_{(42)}$ = -.72, p = .47.

4.1.3 Migration Reasons

During the first assessment interview, most participants gave multiple reasons why they and their families had to leave their country of origin. Participants' responses were organized into previously created categories in accordance with prior research in the field (Jensen et al., 2015; Montgomery, 2010; UNHCR, 2022). The most common reasons for participants were safety; persecution; war; injury, torture, disappearance or death of a family member; or death or disappearance of a parent (see Table 5).

Table 5. Reasons for Leaving the Country of Origin.

"Tell me the main reason why you (and your family) left your country."	
Main reasons	***N*: 75, *n* (%)**
Safety issues	*64 (85.3)*
Persecution	*30 (40.0)*
War	*29 (38.7)*
Prejudice	*17 (22.7)*
Injury, torture, disappearance, or death of a close family member (other than parent)	*16 (21.4)*
Death of a parent or parent went missing	*15 (20.0)*
Physical abuse/injury	*14 (18.7)*
Forced eviction or displacement	*14 (18.7)*
Poverty	*10 (13.3)*
Sexual abuse	*4 (5.3)*
Domestic violence	*2 (2.7)*

4.1.4 Stressful Life Events

Based on the first assessment interview, the most common SLEs experienced by participants were SLEs where they thought they or someone were in great danger, war and armed conflict, the death of someone they cared about, and physical violence (see Table 6). The mean number of SLEs experienced by participants was 6.44 (*SD* = 2.53, ranging from one to 12 SLEs). Less perceived parental support (r = -.368, p < .001) and older age at the time the asylum application was submitted (r = .254, p = .028) were related to a higher number of SLEs experiences.

Table 6. Stressful Life Events Checklist.

Stressful life events	
	***N*: 75, *n* (%)**
1. Have there been drastic changes in your family during the last year?	*35 (47.3)*
2. Have you ever been separated from your family against your will? (By a stranger, police officer, soldier, fleeing your homeland)	*23 (30.7)*
3. Has someone died in your life that you really cared about?	*51 (68.0)*
4. Have you had a life-threatening medical problem?	*19 (25.7)*
5. Have you been involved in a serious accident? (For example, involving a car)	*26 (35.1)*
6. Have you ever been involved in a disaster? (For example, a flood, hurricane, fire, tornado, avalanche, earthquake, hostage situation, chemical disaster?)	*33 (44.0)*
7. Have you ever experienced a war or an armed military conflict going on around you in your country of birth?	*54 (72.0)*
8. Has someone ever hit, kicked, shot at or some other way tried to physically hurt you?	*51 (68.0)*
9. Did you ever see it happen to someone else in real life? (Not just on television or in a film)?	*49 (66.2)*
10. Has someone ever tried to touch your private sexual parts against your will or forced you to have sex?	*16 (21.6)*
11. Did you experience any other very stressful life event where you thought that you were in great danger?	*58 (77.3)*
12. Did you experience any other very stressful life event where you thought that someone else was in great danger?	*54 (72)*
13. Not listed above but you found the event very frightening:	*8 (10.7)*

A multiple linear regression analysis was used to explore the contribution of age when the asylum application was submitted and perceived parental support toward predicting the number of experienced SLEs. Results indicated that the two predictors explained 17% of the variance (R^2 = .167, $F_{(2,72)}$ = 7.225, p < .001). Nevertheless, only perceived parental support (β = -.157, p = .004) and not age (β = .146, p = .101) made a significant independent contribution to the prediction.

4.1.5 Knowledge of Iceland Before Arrival

Almost half of the participants (42.6%), during time point one, said they had first heard about Iceland from someone who told them about the country (either in person or through social media), of which 13.3% lived (or had previously lived) in Iceland. Moreover, 18.7% learned about Iceland by browsing the internet. Few participants did not know anything about Iceland before arrival (14.7%). Finally, some said they had heard about Iceland through school and media coverage of, for instance, the Icelandic national football team, Icelandic music, and news about Iceland.

4.1.6 Contact with Family Members Living Abroad

During the first assessment interview, almost all participants (94.7%) had family members living abroad, of which 63.0% were considered close family members (i.e., parents, siblings, or parents and siblings). Most of these family members lived in their home country or spread between the home country and other countries, and four participants did not know where their family members were.

Nearly half of the participants (50.7%) had "rather much" or "very much" contact with them. Contact was mostly kept through social media, and WhatsApp was the most used social media application (56%), followed by Messenger (9.3%), Facebook (6.7%), and Instagram (2.7%). Only five participants stayed in contact with family members via phone.

Similarly, at time point two, almost all participants (93.0%) had family members living abroad, of which 60.6% were close relatives (i.e., parents, siblings, or parents and siblings). Most of these family members still lived in their home country or were spread between the home country and other countries, and two did not know where their families were. Nearly half of the participants (42.9%) had "rather much"

or "very much" contact with their family members abroad, and most connections were maintained through social media. Again, WhatsApp was the most used social media application (62.8%), followed by Facebook (14.0%) and Messenger (11.6%). Only four participants stayed in contact with family members via phone.

4.1.7 Perceived Icelandic Proficiency

As seen in Table 7, during the first assessment interview, younger age when the asylum application was submitted, a longer length of stay in Iceland, and greater perceived parental support were significantly related to better perceived Icelandic proficiency.

Table 7. Pearson Correlations Between Age at Asylum Application, Length of Stay in Iceland, Perceived Parental Support, and Perceived Icelandic Proficiency at TP1.

Correlations				
Variables	**1.**	**2.**	**3.**	**4.**
1. Age at asylum application	-			
2. Length of stay in Iceland	*-.28**	-		
3. Perceived parental support	*-.22*	*.28**	-	
4. Perceived Icelandic proficiency	*-.45***	*.63***	*.25**	-

Note. *Significant at the 0.05 level (2-tailed). **Significant at the 0.01 level (2-tailed).

Furthermore, a difference was found between children and youth who traveled accompanied (n = 38, M = 4.13, SD = 1.63) and those who traveled alone (n = 37, M = 3.30, SD. = 1.43) in the level of perceived Icelandic proficiency, with those who traveled accompanied perceiving significantly greater Icelandic proficiency ($t_{(73)}$ = -2.35, p = .02).

A logistic regression was performed to ascertain the effects of age when the asylum application was submitted, length of stay in Iceland, and perceived parental support on the likelihood that participants had greater language proficiency (at TP1). The model was statistically significant $\chi^2_{(4)}$ = 27.53, p < .001, and explained 42.9% (Nagelkerke R^2) of the variance in language proficiency, correctly classifying 74.6% of the cases. Moreover, those who traveled accompanied were 4.108 times

more likely to perceive better Icelandic proficiency than those who traveled alone to Iceland. Living longer in Iceland was also associated with a greater likelihood of having better Icelandic proficiency.

Perceived Icelandic proficiency significantly increased between the first (M = 3.9, SD = 1.7) and the second assessment interview (M = 4.6, SD = 1.7) ($t_{(42)}$ = -4.0, p < .001).

4.1.7.1 The Experience of Learning Icelandic in Iceland – Participants' Voices

During the first assessment interview, almost one-fourth of participants (24.0%) recounted negative experiences related to learning Icelandic. For instance, some participants mentioned that Icelandic was difficult to learn, particularly the grammar. Others were dissatisfied with the quality of Icelandic instruction in schools and language courses. Several participants said they could not practice the language outside the classroom or in their everyday lives, as they felt isolated in refugee camps and lacked the opportunities to learn and practice the language with Icelanders. A few mentioned that it was hard to concentrate and learn the language while waiting for their asylum application to be processed.

However, for over one-fourth of the participants, the experience of learning Icelandic was mainly positive (26.7%). Several mentioned they had supportive and encouraging teachers or were content with their school or Icelandic language courses. While others mentioned that they had learned Icelandic while socializing and speaking with Icelandic people. Only seven participants said Icelandic was easy to learn.

Almost half of the participants (49.3%) recounted mixed positive and negative or neutral experiences related to learning Icelandic. For instance, some mentioned that while they were optimistic about learning Icelandic, they found it challenging and could not practice it. Others stated that although they were learning the language, they had difficulty concentrating as their living environments were not supportive (e.g., they felt unsafe in their place of dwelling) or because they were waiting for a decision on their asylum claim. Seven participants mentioned that the Covid-19 pandemic had affected their education, for instance, because they lacked a computer or a "good" smartphone to join classes, study, or do homework.

4.1.8 The Asylum Experience in Iceland

During the second assessment interview, over half of the participants indicated that the experience of seeking asylum had been "very difficult" or "rather difficult" (53.5%). In comparison, the rest found the experience to be "rather easy" or "very easy" (46.5%).

4.1.8.1 The Asylum Experience in Iceland - Participants' Voices

During the first assessment interview, the perception of the experience of seeking asylum was negative for almost half of the participants (50.7%). The waiting period was predominantly challenging, and many participants stated that during this time, they had felt afraid, depressed, hopeless, alone, unsafe, stuck, nervous, and isolated, among other feelings. For some, the worst part of waiting was being unable to work, attend school, participate in society, or make their own decisions. Moreover, dealing with immigration or the police was challenging for several participants (e.g., a frightening experience, long and difficult interviews, cameras everywhere, disbelief in their stories, and feeling mistreated or discriminated against). They, too, found the immigration housing unacceptable (e.g., unclean, remote, and isolated). For instance, one participant mentioned that when he turned 18, they transferred him to a remote refugee camp where he had to share a room with a much older person, which made him feel afraid and mistreated.

Moreover, several mentioned that having no Icelandic identification (ID) meant they could not fully participate in society. For instance, they could not work, open a bank account, obtain an electronic ID, join a football club, book medical appointments, get prescriptions, buy electronic equipment, or participate in organized sports or school excursions abroad. Furthermore, a few were disappointed that the Directorate of Immigration could decide how old they were and did not accept their reported date of birth (i.e., after undergoing age assessment). Lastly, a few felt they lacked support from their lawyers or social workers.

Almost one-quarter of participants (24%) found the experience of seeking asylum positive. Several mentioned they were thankful for the support and help they

received from the Icelandic Government (e.g., financial aid, medical care, and social services). Also, some did not have to wait long for an answer on their asylum claim, and others said the Directorate of Immigration's staff had been respectful and helpful.

The experience of seeking asylum was mainly mixed (positive and negative) for one-quarter of the participants (25.3%). Some mentioned that they were thankful for the support and help they received but that the waiting period had been difficult. Moreover, one participant noted that having no Icelandic ID had been hard, but once she received her ID, she was finally legal, did not have to fear anymore, and was free to work and study.

4.1.9 PTSD symptoms – First and Second Assessment Interviews

The mean scores on the PTSD scale (i.e., RATS) were 48.0 (N = 43, SD = 10.0) during the first assessment interview and 45.4 (N = 43, SD = 13.4) for the second assessment interview. Paired sample t-test scores showed that PTSD symptoms scale mean scores did not change significantly between the two time points ($t_{(42)}$ = 1.64, p = .11). However, 51.2% of participants scored above the cut-off score on the PTSD symptoms scale during the first assessment interview and 35% during the second assessment interview.

4.1.10 Mental Well-being

During the second assessment interview, scores on the mental well-being scale (i.e., SWEMWBS) were slightly below the cut-off score for positive well-being (N = 43, M = 26.14, SD = 5.86). Spearman correlations revealed that greater perceived parental support (r = .36, p = .02) and greater perceived peer support (r = .40, p = .009) were significantly related to higher scores on the mental well-being scale (at TP2). Additionally, lower mean scores on the PTSD symptoms scale (r = -.38, p = .01) were significantly related to higher mean scores on the mental well-being scale. A multiple regression analysis was conducted to explore the contribution of perceived peer support, parental support, and PTSD symptoms scale scores to predicting scores on the mental well-being scale. Results indicated that the three

predictors explained 38% of the variance (R^2 = .38, $F_{(3,38)}$ = 7.83, p < .001). Although only perceived peer support (β = .61, p = .006) and PTSD symptoms scores (β = -.19, p = .002) made a significant contribution to the prediction and not perceived parental support (β = .17, p = .36) (when controlling for the other variables).

4.2 Paper II

During time point one, participants indicated having experienced a considerable number of SLEs (M = 6.44, SD = 2.53), with those who traveled alone to Iceland (n = 37, M = 7.03, SD = 2.37) experiencing significantly more SLEs than those traveled accompanied (n = 38, M = 5.87, SD = 2.58) ($t_{(73)}$ = 2.02, p = .05). No significant differences were found between females (n = 25, M = 6.24, SD = 2.44) and males (n = 50, M = 6.54, SD = 2.60) in the number of experienced SLE ($t_{(73)}$ = -.48, p = .63).

During the first assessment interview, mean total scores for PTSD symptoms (i.e., RATS scores) and psychological symptoms (i.e., HSCL-37A scores) were in the average range. Nevertheless, over half of the participants (53.3%) scored above the cut-off score for PTSD symptoms, and over one-third scored above the cut-off score for total psychological symptoms (38.7%). Independent sample t-test analyses were conducted to compare the mean levels of PTSD and psychological symptoms of participants who traveled accompanied and unaccompanied to Iceland; however, no significant differences were found in levels of PTSD and psychological symptoms between the two groups.

As seen in Table 8, SLEs experiences were significantly and positively related to PTSD and psychological symptoms. Moreover, less perceived parental support and less perceived peer support were significantly and negatively related to higher PTSD scores but not to psychological symptoms scores. Moreover, a positive and significant correlation was found between PTSD and other psychological symptoms.

Table 8. Pearson Correlations for Perceived Parental and Peer Support, SLEs, RATS, and HSCL-37A at TP1.

Correlations					
Variables	**1.**	**2.**	**3.**	**4.**	**5.**
1. Perceived parental support	-				
2. Perceived peer support	*.10*	-			
3. SLEs	*-.34***	*-.04*	-		
4. RATS	*-.23**	*-.33***	*.44***	-	
5. HSCL-37A	*-.13*	*-.16*	*.30***	*.81***	-

Note. *Significant at the 0.05 level (2-tailed). **Significant at the 0.01 level (2-tailed).

A multiple linear regression analysis was conducted to explore the contribution that perceived parental support, perceived peer support, and the number of SLEs experiences made towards predicting PTSD symptoms' scale scores. Results indicated that the three predictors explained 30.0% of the variance (R^2 = 0.30, $F_{(3,71)}$ = 10.16, p < .001), with perceived peer support (β = -.75, p = .003) and the number of SLE experiences (β = 1.82, p < .001) making a significant contribution to the prediction. However, perceived parental support did not make a significant independent contribution when controlling for the other variables (β = -.14, p = 0.56).

Similarly, a multiple linear regression analysis was conducted to explore the contribution of perceived parental support, perceived peer support, and the number of experienced SLEs made toward predicting psychological symptoms' scale scores. Results indicated that the three predictors explained 11.3% of the variance (R^2= 0.113, $F_{(3,71)}$ = 3.01, p = .04), with only SLE (β = 2.16, p = .02) making a significant contribution to the prediction. Perceived parental support (β = -.06, p = .90) and perceived peer support (β = -.62, p = .19) did not make significant independent contributions to the prediction when controlling for the other variables.

4.3 Paper III

During the first assessment interview, a chi-square test revealed a significant difference in the frequency of preferred acculturation strategies (X^2 (1, N = 75) = 5.36, p = .021), with most participants indicating that they preferred the integration strategy (n = 29, 38.7 %), followed by marginalization (n = 19, 25.3 %), assimilation (n = 14, 18.7 %), and separation (n = 13, 17.3 %).

One-way ANOVAs were conducted to study the effects of acculturation strategy on mental health outcomes. Results showed that the effect of the acculturation strategy was significant for the PTSD symptoms scale ($F_{(3,71)}$ = 3.67, p = .016) and depression symptoms subscale ($F_{(3,71)}$ = 3.03, p = .035). However, the effect was not significant for the HSCL-37A scale ($F_{(3,71)}$ = 2.52, p = .064), the anxiety symptoms subscale ($F_{(3,71)}$ =1.70, p = .175), or the externalizing symptoms cluster ($F_{(3,71)}$ = 1.15, p = .34). Furthermore, Tukey's post hoc tests showed that the integration strategy group had significantly lower mean levels of PTSD symptoms scores than the marginalization group (p = .042), and the assimilation group had significantly lower mean levels of PTSD symptoms scores than the marginalization group (p = .018). Finally, the integration strategy group had significantly lower mean depression symptoms scores than the marginalization group (p = .027).

Two-way ANOVA results indicated that there was a significant main effect of acculturation strategy on PTSD symptoms (p = .02) but not a main effect of duration of stay in Iceland on PTSD symptoms (p = .39). Also, no statistically significant interaction was found between acculturation strategy and time of stay in Iceland on PTSD symptoms ($F_{(3,\ 67)}$ = .32, p = .81). Likewise, a significant main effect of acculturation strategy on depression symptoms was found (p = .03); although not for the duration of stay in Iceland (p = .82), nor the interaction between the two independent variables on depression symptoms ($F_{(3,\ 67)}$ = .41, p = .75).

Tukey's post hoc test results revealed that the integration strategy group had significantly lower mean levels of PTSD symptoms (p = .032) and significantly lower mean levels of depression symptoms (p = .030) than the marginalization group. Also, the assimilation group had significantly lower mean PTSD symptom scores than the marginalization group (p = .013).

5 Discussion

The overall aim of this study presented in this thesis was to address gaps in the literature by exploring how psychosocial factors occurring across the different phases of migration play a role in the mental health of children and youth seeking refuge in Iceland. Moreover, the study helped address a gap in understanding these young individuals' experiences dynamically, distinguishing the changes that arise across two points in time. Lastly, the study aimed to broaden our understanding of the preferred acculturation strategies by children and youth who arrive in the resettlement country as asylum-seekers and their relationship to mental health outcomes. Study results help shed light on the dynamic process involving a confluence of factors occurring during pre-migration, flight, and post-migration, which can impact these young people's inner lives and subsequent adaptation.

5.1 Stressful Life Events

Results confirmed that children and young asylum-seekers are exposed to numerous SLEs (Jakobsen et al., 2014; Jensen et al., 2015; Müller et al., 2019). Analogous to other studies, lack of safety, persecution, war, and the disappearance or death of a parent or close family member acted as push factors forcing participants to flee their home countries (Jensen et al., 2015; Montgomery, 2010; UNHCR, 2022). The findings demonstrate that these young individuals were compelled to leave their home countries due to various adverse circumstances and hence qualify as forced migrants rather than voluntary migrants (i.e., individuals who choose to migrate and can return to their home countries if they so desire). Moreover, study participants reported having experienced numerous SLEs, on average a little more than six events, or considerably more than their Icelandic contemporaries (Rafnsson et al., 2006). No gender differences concerning the prevalence of SLEs experiences were found in this study. It has been suggested that female refugees have an increased risk of experiencing gender-related traumatic events (e.g., sexual abuse) than male refugees, increasing their risk of developing PTSD (Vallejo-Martín et al., 2021; Vu

et al., 2014). From these results, it can be concluded that for young female forced migrants, it is the type of SLEs (i.e., gender-related) they have experienced and not the number of events that carries weight. Further research might help shed light on the relationship between gender and exposure to traumatic events for this particular group.

Similar to other studies, the study participants who traveled alone to Iceland (i.e., the resettlement country) reported significantly more stressful life experiences than those who traveled accompanied (Müller et al., 2019). Likewise, research has suggested that unaccompanied asylum-seeing children are at greater risk of exposure to physical and psychologically traumatic experiences (Derluyn et al., 2009; Wiese & Burhorst, 2007). In this respect, parental support appears to protect forced migrant children and youth against SLEs exposure.

5.2 Social Support and Mental Heath

Children and youth who traveled accompanied to Iceland experienced significantly higher levels of perceived parental support than those who traveled unaccompanied. Although there may seem to be an apparent link between traveling accompanied and parental support, some severely traumatized parents cannot adequately support their offspring, which might affect their children's mental health (Blackmore et al., 2019). For instance, for Syrian refugee mothers in Libanon, general psychological distress directly affected parental rejection and harsh punishment, which mediated the association between maternal and children's psychological health (Sim et al., 2018).

Study results revealed high levels of psychological distress among participants, akin to other studies (Blackmore et al., 2019). A greater number of SLEs was significantly and positively related to higher levels of PTSD and other psychological symptoms. No significant differences were found in psychological scale scores between those traveling alone and unaccompanied to Iceland. These findings contradict studies underlining the vulnerability of unaccompanied minors to developing psychological issues (Bean et al., 2007b; Wiese & Burhorst, 2007). However, studies have found that child and adolescent refugees and asylum-seekers

in general (i.e., both accompanied and unaccompanied children and youth) are at risk of reporting high levels of mental distress (Blackmore et al., 2019; Müller et al., 2019). Furthermore, the study results back the assumption that low social support is linked to an increased risk for PTSD, depression, and anxiety symptoms (Klineberg et al., 2006; Sierau et al., 2019). Further analyses revealed that lower levels of perceived peer support and a greater number of SLEs predicted PTSD symptoms, suggesting that peer support might help these children and youth cope with SLEs, diminishing the risk of developing PTSD symptoms following traumatic events (Scharpf et al., 2021).

For this population, as in this study, PTSD symptoms tend to remain persistent over time (Jensen et al., 2019; Reavell & Fazil, 2017; Vervliet et al., 2014). Still, for study participants, lower PTSD symptom scores at time point two and higher levels of perceived peer social support were related to greater mental well-being. Compatibly, a recent systematic review revealed that supportive peers and school belonging, among other factors, contributed to the mental health of refugee children and adolescents (Scharpf et al., 2021). Other studies have also highlighted the role of mentor support (i.e., group home caregivers and sports coaches) in processing SLEs and maintaining the mental health of unaccompanied refugee minors (Sierau et al., 2019). Therefore, while SLEs experiences are common among forced migrant children and youth, psychosocial factors can contribute to their mental well-being. However, longitudinal research might help better understand the role of resilience and risk factors on the mental well-being of this population.

5.3 Social media and Contact with Family Members

As expected, the internet and social media afforded participants information about Iceland before migration (principally via word-of-mouth). Similarly, research suggests that in deciding where to migrate, social media information arising from existing social relations and personal experience is considered more trustworthy (Dekker et al., 2018). Social media also helped participants stay in touch with family members living abroad, confirming that young migrants maintain connections with family and friends through virtual spaces that help them create

closeness despite the distance (Doná, 2015; Veale & Doná, 2014). Contact with family members living abroad can also help these young individuals practice and maintain their first (native) language, which can contribute to the acquisition of the resettlement country's language (Yazici et al., 2010).

5.4 Language Proficiency

Proficiency in the resettlement country's language is central to the adaptation of children and youth immigrants. For study participants, higher levels of perceived parental support and traveling accompanied to Iceland were related to a better perceived Icelandic language proficiency. These results suggest that the presence of parents in the lives of these young people (through social media or in person) facilitates their learning of Icelandic. Likewise, other studies have suggested that parental support helps protect children's vocabulary development against adverse conditions (Baydar et al., 2014). Analogously, support from parents and family members can help preserve children's first (native) language, playing an essential role in their development, education, and second-language acquisition (Yazici et al., 2010). Although Icelandic is a challenging language and scarcely spoken worldwide, participants' experiences related to learning Icelandic were somewhat optimistic. For them, the most conducive way of learning the language was through socializing and communicating with Icelanders, confirming the importance of social support for a positive adaptation process.

5.5 The Process of Seeking Asylum

Apart from the language proficiency, other factors, such as the asylum process, can interrupt the adaptation process of child and youth forced migrants. Similar to other studies, for half of the study participants, seeking asylum in Iceland was an arduous experience, particularly during the waiting period (Guðmundsdóttir et al., 2018; Nielsen et al., 2008). Still, during time point two, a negative asylum process experience was not related to poorer mental well-being, contrary to other studies (Braun-Lewensohn & Al-Sayed, 2018; Nielsen et al., 2008). In this regard, results might suggest that since most participants had received legal status in Iceland at time point two, they were no longer waiting for a decision on their asylum claim

and felt rightfully safe in Iceland. Other challenges faced by participants during the asylum process were, for instance, negative feelings (e.g., feeling afraid, alone, or unsafe), dealing with the immigration authorities, inadequate housing facilities, and being unable to participate fully in society because of their lack of legal status in Iceland. For those who later receive residency in Iceland, these negative experiences can create acculturative stress affecting their subsequent adaptation.

5.6 Acculturation Strategies and the Integration Hypothesis

A critical factor contributing to child and youth forced migrants' mental well-being is the acculturation strategies they opt for (or are forced upon them). The integration acculturation strategy was favored by study participants, similar to other studies (Berry et al., 2006; Berry & Hou, 2017). However, separation, and not marginalization, was the participants' least preferred acculturation strategy. Relatedly, an Australian study concluded that the integration and marginalization strategies may be the two main options for refugee youth (Buchanan et al., 2017). Marginalization involves rejection by the larger society, paired with heritage culture loss, which can create hostility and diminished social support (Berry, 1997). Frequently, marginalization is not a free choice, but circumstances such as discrimination might compel individuals to select it (Berry, 1997). This might explain why in this study, marginalization was related to more symptoms of PTSD and depression. The decision to opt for marginalization among participants may also be related to the Icelandic context and may be a means of coping with challenging conditions. When the weather is harsh in the winter, it might be more difficult for some individuals to leave their homes, resulting in isolation. Furthermore, some young asylum-seekers are placed in reception facilities that are isolating and restrictive in daily life (UNICEF, 2019).

Participants who preferred the integration strategy reported better mental health outcomes (i.e., fewer PTSD and depression symptoms) than those who opted for marginalization, akin to other studies (Berry et al., 2006; Berry & Hou, 2017; EL-Awad et al., 2021; Schmitz & Schmitz, 2022). Therefore, study results confirm that the integration strengthened participants' mental well-being. Finding a balance

between heritage and mainstream cultural identities helps contribute to young immigrants' psychological and sociocultural adaptation (Berry et al., 2006). According to Berry (1997), people who prefer integration obtain social support from two cultural communities (i.e., heritage and mainstream), which offers double protection against acculturative stresses. Therefore, for these young individuals, contact with members of the heritage and larger mainstream communities may result in increased social support, which can act as a protective factor in helping them cope with SLEs, contributing to their mental health and psychosocial adaptation. However, future research should focus on the acculturation development of these children in Iceland to examine the acculturative changes that occur with the passage of time.

Overall, the study results contribute to the literature by providing a better understanding of the migration journeys of child and youth forced migrants fleeing to Iceland. Some unexpected findings in this study seem related to the Icelandic context. For instance, although the Icelandic language can be challenging, these young individuals recognized the value of social support for enhancing their second language skills. However, a large percentage of participants spoke English. During the second assessment interview, most participants preferred to be interviewed in English, in their native language (with the help of an interpreter), or Spanish but only a couple elected to be interviewed in Icelandic. Indicating that while participants perceived better Icelandic proficiency during time point two, they did not feel competent enough in the language to be interviewed in Icelandic.

Moreover, even though the asylum process was burdensome, particularly the waiting period, it did not significantly affect their mental well-being. It was also unexpected that participants found marginalization the second most preferred strategy. This begs the question of whether marginalization is related to the Icelandic context or is unique for this immigrant group since there is a gap in the literature concerning the preferred acculturation strategies of asylum-seeker children and youth.

5.7 General Methodological Limitations and Strengths

Several limitations should be considered when interpreting study results. One limitation is the self-reporting nature of the study since only children and youth served as informants, and caregivers were not involved. Therefore, the assessment of mental health symptoms relied solely on participants' self-reports. Additionally, the study sample had fewer females than males, which made it challenging to analyze differences based on gender. Furthermore, psychosocial factors' role may differ in other countries' social and geographical contexts. Therefore, caution should be taken when generalizing results to settings culturally and geographically different from Iceland.

Another limitation is the cross-sectional nature of the data, and only the presence of two time points (i.e., paper I), which made it difficult to draw causal links between the constructs under study. Regarding paper III, longitudinal studies might be more suitable when studying acculturation strategy preferences, as acculturation is a dynamic process that tends to change over time (Berry, 1997). Furthermore, fewer interviews were conducted during time point two than time point one, as fewer individuals remained in the study, making follow-up with participants difficult. Also, as only a share of those who belonged to this population participated in the study, those who declined participation or could not be reached may be in some way different from those who partook in this study (e.g., are more isolated).

External factors such as the Covid-19 pandemic might also have affected participants. However, few Covid-19 restrictions were in place during the assessment interviews. Also, restrictions were not as limiting in Iceland as in other countries since Iceland could close its international borders, and 82% of the population received complete vaccination (Directorate of Health & Department of Civil Protection and Emergency Management, 2023).

Cultural bias might also be a limitation, as the interviewer (Ph.D. student), interpreters, and study participants came from diverse cultural backgrounds. Cultural bias is the tendency to judge people and interpret phenomena, situations, or

data in terms of the researcher's cultural assumptions. However, in this study, interpreters acted as cultural mediators, and the interviewer is from Latin America.

Apart from these limitations, several strengths are apparent in this study. This is the first quantitative study examining the migration experiences, acculturation preferences, and mental health of children and young forced migrants fleeing to Iceland. Also, this is the first study in Iceland examining the SLEs experienced by children and young forced migrants and the role that SLEs and psychosocial factors play in mental health symptoms and well-being. Furthermore, the study helps fill the gap in the literature concerning forced migrant children and youth's preferred acculturation strategies and their effect on mental health outcomes.

Additionally, as children and youth traveling alone and accompanied to Iceland participated in this study, direct comparisons between these two groups were possible. Moreover, there was very little missing data as difficulties in understanding could be resolved since the assessment took place in an interview-like setting with the help of interpreters when required. Another strength of the study is the use of standardized measures frequently used among refugee minors in Europe, which made it possible to compare study results with those of similar studies. Additionally, as mentioned before, study interpreters acted as cultural mediators facilitating communication between the interviewer and participants and providing support regarding cultural attitudes, beliefs, and behaviors. Likewise, the interviewer had insight into the Latin American culture and the experiences of immigrants in Iceland.

Finally, a critical strength of this study is that it advances our knowledge in this general area of study in Iceland, recognizing the peculiar circumstances that children and youth forced migrants face when moving to a remote country with a challenging environment and complex language.

6 Conclusions

In conclusion, forced migrant children and youth are often exposed to traumatic events throughout their migration journeys, which increases their risk of developing mental health problems. Accordingly, study results conveyed in the three papers presented in this doctoral thesis underline the need for early assessments of psychological symptoms and appropriate mental health services, particularly trauma-focused treatment, to promote the mental health of these vulnerable individuals.

Study results also highlight the importance of social support for a positive migration experience, adaptation process, and mental health and well-being of child and youth forced migrants. For these young individuals, social support aids in minimizing exposure to SLEs, promotes the acquisition of the resettlement country's language, prevents the potential development of mental health problems, and fosters mental well-being. Furthermore, integration (i.e., biculturalism) increases the social support these children and youth receive from their heritage and mainstream communities protecting them against acculturative stresses and contributing to their mental health and psychosocial adaptation (Berry, 1997).

Although this study's population pertains to forced migrant children and youth, results can be generalizable to other groups of young immigrants (e.g., voluntary migrants and second-generation immigrants). The results presented in this thesis point towards the importance of creating and enforcing a clear integration policy that ensures that all immigrants, regardless of their age and background, can participate in all aspects of society while simultaneously encouraging the preservation and promotion of diverse cultures and cultural practices. This is the essence of a multicultural society, which requires cultural diversity and social participation equity (Berry & Ward, 2018).

On June 2022, a Parliamentary Resolution on an implementation plan for immigration issues for the years 2022 to 2025 was approved in Iceland

(Parliamentary Resolution 29/152, 2022). One of the resolution's aims is to formulate a clear and comprehensive long-term policy regarding immigrants, refugees, and multiculturalism. Ensuring that people who settle in Iceland integrate and actively participate in all areas of society, regardless of their origin and nationality. In this policy, particular emphasis will be placed on social rights, health care, education, and employment, ensuring that Iceland becomes a multicultural society where the basic principles are equality, justice, and respect for the individual.

For this policy to work effectively, it requires evidence-based concepts and methodology in its formulation. It also needs financial resources, responsive and active engagement by all the responsible parties, and effective feedback and evaluation mechanisms. Moreover, it is also important to systematically evaluate the long-term effects of such governmental policy on the mental health and adaptation of young immigrants (e.g., children and youth) to determine the causes of psychological distress and acculturation stresses among these individuals in the country of resettlement (i.e., Iceland).

6.1 Future Directions

For immigrant children and youth, the acculturation process is part of their ontogenetic development. Acculturation development provides a framework for understanding how different facets of culture influence developmental processes. For immigrant children, development is embedded in the two sociocultural domains in their lives, the heritage and the mainstream culture. Consequently, children's experiences through these two domains help them develop domain-specific cultural working models to guide their behavior (Oppedal & Toppelberg, 2016). As immigrant children and youth must navigate between two or more cultural contexts, they develop the cultural competence and skills necessary to participate in the activities of the different cultural groups in meaningful ways. Accordingly, acculturation can be seen as a developmental process in a multicultural context where gaining cultural competence is an essential developmental task (Oppedal & Toppelberg, 2016). In this regard, future research should take a lifespan approach

for studying the acculturation development of immigrant children in the Icelandic context in order to recognize protective and risk factors related to their development and psychosocial adaptation.

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Appendix: Papers I, II and III

I. Cardenas, P., Doná, G., Sam, D.L., & Ásgeirsdóttir, B. B. (2023). *The migration experience of children and youth who seek asylum in Iceland* [Manuscript submitted for publication]. Department of Psychology, Reykjavik University

II. Cardenas, P., Ásgeirsdóttir, B. B., Sam, D. L., & Doná, G. (2022). Stressful life events, psychological symptoms, and social support of children and young asylum-Seekers in Iceland. *Scandinavian Journal of Public Health.* Advance online publication. https://doi.org/10.1177/14034948221142080

III. Cardenas, P., Ásgeirsdóttir, B. B., Doná, G., & Sam, D. L. (2022). *The integration hypothesis and positive mental health outcomes for children and young asylum-seekers in Iceland.* [Manuscript submitted for publication]. Department of Psychology, Reykjavik University

Paper I

The Migration Experience of Children and Youth who Seek Asylum in Iceland

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Abstract

Due to current global circumstances, Iceland has experienced a sharp increase in children, youth, and families seeking refuge. The aim of this study was to examine the migration experience of children and youth who arrived in Iceland as asylum-seekers and to explore the role that psychosocial factors played in their mental well-being. Assessment interviews were conducted at two time points, approximately eight months apart, with a group of children and youth who fled to Iceland. Seventy-five individuals ages 13 to 24 (M = 19.7, SD = 3.0, 75% male) participated at time point one, and 43 participants (M = 20.16, SD = 3.1, 56% male) remained in the study at time point two. Results suggest that the migration experience of children and youth asylum-seekers is a dynamic process involving a confluence of factors occurring during pre-migration, flight, and post-migration, which can positively and negatively impact their lives. For instance, participants experienced numerous stressful life events (SLEs) that acted as push factors forcing them to flee. Consequently, they reported Post-Traumatic Stress Disorder (PTSD) symptoms that remained persistent between time points one and two. However, parental social support protected them against exposure to SLEs. Moreover, social support contributed to their Icelandic language proficiency. Lastly, greater social support and fewer PTSD symptoms were associated with greater mental well-being at time point two. The findings demonstrate the importance of social support and early psychological assessment and intervention for a positive adaptation process and to promote the mental well-being of this vulnerable group.

Keywords: Children, youth, asylum-seeker, migration, and well-being.

Highlights:

- The migration experience of children and youth seeking refuge is a dynamic process involving numerous factors which can impact their lives
- Social support helps protect these children and youth against exposure to stressful life events and promotes second language learning
- Social support and fewer PTSD symptoms contribute to the mental well-being of these children and youth in the country of resettlement
- Study results highlight the importance of social support and early access to mental health services for this vulnerable population

The Migration Experience of Children and Youth Who Seek Asylum in Iceland

Global circumstances have forced millions of children and youth to move across international borders in search of safety and protection. According to the United Nations High Commissioner for Refugees (UNHCR), in 2021, children comprised 41% of the 89.3 million people forcibly displaced worldwide (2022). Events occurring during the migration experience of children and youth refugees can play a significant role in their development and alter the family structure (Jakobsen et al., 2017; Keles et al., 2018; Lustig et al., 2004). Migration research has demonstrated that child and youth migration is not static but a dynamic, multi-directional process arising in response to global change (Veale & Doná, 2014). This process starts before these young individuals' journeys begin and extends beyond resettlement, and various factors occurring along the way can impact their lives.

The term refugee refers to people who are forced to flee their home countries due to persecution, war, or violence (United Nations, 1967). More broadly, forced migration refers to the involuntary movement of individuals away from their homes due to factors such as persecution, war, violence, human rights abuses, and natural catastrophes (International Organization for Migration, 2022). On the other hand, an asylum-seeker is someone who has filed an asylum claim (i.e., requesting refugee status) but whose asylum application is still being processed. Accompanied asylum-seeking children (below 18) file an asylum claim along with a parent or legal guardian. However, unaccompanied minors seeking asylum go through this process alone or without a parent or legal guardian. In this study, the terms "traveling accompanied" or "traveling alone" are used instead, as some participants were young adults.

In 2015, countries in the Nordic and Baltic European region experienced a sharp increase in refugees, asylum-seekers, and stateless people. Subsequently, this led countries like Denmark, Finland, Norway, and Sweden to revise their migration policies, consequently slowing down the influx of forced migrants into these countries (Hagelund, 2020; UNHCR, 2019). However, other countries in Northern and Baltic Europe, such as Iceland, experienced a sharp and steady increase in people seeking refuge. In 2020, Iceland, the least populated country in Northern Europe, had the highest number of asylum seekers per capita compared to other members of the Organization for Economic Co-operation and Development (OECD) (Lindahl, 2021).

In 2020, 654 individuals sought asylum in Iceland, while 4,516 individuals claimed asylum in 2022. In comparison, only 354 individuals sought asylum in Iceland in 2015. Moreover, between 2016 and 2022, an average of 25% of asylum applications came from children, mostly traveling accompanied (Directorate of Immigration, n.d.). An asylum-seeker is here defined as a forced migrant who has fled their home in search of

safety and protection and applies for asylum (i.e., refugee status) in a receiving country. Child and young forced migrants fleeing to Iceland face difficulties related to the country's geographical location and its complex and unique language, which merits studying the migration experience of this vulnerable migrant group in this context.

Forced migration is a dynamic process that starts before arrival in the receiving country and continues beyond resettlement. Before the actual flight, children and youth forced migrants often undergo stressful and overwhelming experiences (UNHCR, 2020). Common reasons for flight for children and youth forced migrants are the loss of a parent or family member, experiencing or witnessing violence, war, sexual violence, and life-threatening events (Jakobsen et al., 2014; Jensen et al., 2015). Lack of opportunities to play due to war, parents' exposure to torture (Montgomery, 2011), disruption in education and social development, and threats at the individual and family level can affect child refugees (Lustig et al., 2004).

Many refugees experience extended exile, long-term displacement, and some even dwell in refugee camps for years and decades at a time, which can generate distress (Hyndman & Giles, 2017). These long journeys can interfere with children's formal education and affect their ability to adapt (Bond et al., 2007; Ottósdóttir & Wolimbwa, 2011). Moreover, many children and youth lack knowledge about the resettlement country before arrival, which creates uncertainty. However, nowadays, the internet and social media provide a source of information that aids forced migrants in deciding whether to migrate and where to settle (Dekker et al., 2018).

Children, youth, and families forced to flee are also exposed to stressful life events (SLEs) during flight. However, research is lacking regarding factors affecting this population's risk of exposure to traumatic experiences and adversity (Mattelin et al., 2022). Still, factors such as younger age (i.e., ages 14 to 25) and traveling alone or with a non-family member are associated with vulnerability to experiencing abuse and exploitation during migration (Bartolini & Zakoska-Todorovska, 2020). Consequently, exposure to traumatic events pre-migration and throughout flight can affect children and youth forced migrants' mental health.

Psychological distress is related to SLEs experienced by refugee youth before arrival in the resettlement country (Müller et al., 2019) or to parental separation for unaccompanied asylum-seeking children (UASC) (Derluyn et al., 2009). SLEs and conflict are related to youths' mental health problems (Asgeirsdottir et al., 2011), and post-traumatic stress disorder (PTDS) is prevalent among child and adult refugees resettled in Western countries (Authors, 2022; Fazel, Wheeler & Danesh, 2005). Unfortunately, long-term studies reveal that the PTSD symptoms of this population remain persistent over time (Jensen et al., 2019; Vervliet et al.,

2014). Child and youth forced migrants are, however, able to experience positive well-being despite adversity (Doná & Young, 2016).

Many refugee children and youth do well and are able to handle difficulties and challenges related to finding a balance between heritage and mainstream cultural identities (Keles et al., 2018; Montgomery, 2010). Consequently, researchers argue that the post-migration experiences of migrant youth are better predictors of mental health, resilience, and sociocultural adaptation than events occurring before resettlement (Belhadj Kouider et al., 2014; Keles et al., 2018; Montgomery, 2010). Sociocultural adaptation refers to participation in school and work, competence in dealing with everyday life, and proficiency in the language of the country of resettlement (Montgomery, 2011). For instance, a qualitative study with a group of seven unaccompanied boys in Iceland revealed that they were not offered enough opportunities for education, extracurricular activities, and socializing with peers, which negatively affected their well-being and adjustment (Ottósdóttir & Bragadóttir, 2021). Therefore, psychosocial factors, such as second language proficiency, social support, contact with family abroad, and the process of seeking asylum, can impact the lives of this vulnerable group in positive and negative ways.

Knowledge of the resettlement country's language can positively impact refugees' sociocultural adjustment (El Khoury, 2019) and contribute to refugee youth's mental health (Müller et al., 2019). For refugee children in Iceland, for instance, Icelandic language proficiency is the key to achieving equality in society (Ottósdóttir & Wolimbwa, 2011). Likewise, having family and friends in the receiving country can be a source of support for children and young asylum-seeker and can have beneficial effects on their mental health (Oppedal & Idsoe, 2015).

Parental support (Asgeirsdottir et al., 2010) and peer support can also help prevent the potential effects of trauma exposure (Authors, 2022; Sierau et al., 2019). Stronger peer attachment and living with parents at home are significantly associated with greater well-being (Correa-Velez et al., 2010). Additionally, maternal warmth and responsiveness, and support from the extended family and community, help protect children's vocabulary development against adverse conditions (Baydar et al., 2014). Still, for child and youth refugees whose family members live abroad, social media and online communication (e.g., WhatsApp groups, Messenger, and Facebook) can help maintain and fortify relationships creating closeness in the distance (Doná, 2015). Asylum-seeking youth can perceive high levels of support from their families abroad, despite indirect communication and lack of physical contact with them (Oppedal & Idsoe, 2015).

Apart from the above-mentioned psychosocial factors, the process of seeking asylum can be stressful and adversely affect children's mental health (Nielsen et al., 2008). In Iceland, child and youth asylum-seekers expressed feeling ignored during the asylum process, were concerned about waiting for a decision on their asylum claim, and worried about their futures (Guðmundsdóttir et al., 2018). Moreover, they experienced reduced access to extracurricular activities, and those who traveled unaccompanied expressed a lack of care and support (UNICEF, 2019). Furthermore, Iceland is a secluded island near the Artic Circle with unpredictable weather, and Icelandic is a complex language mainly spoken in Iceland. However, little is known about the unique challenges that child and youth forced migrants face when fleeing to Iceland.

Against this background, the study aimed to explore the migration experience (i.e., pre-migration, flight, and post-migration) of children and youth who arrived in Iceland as asylum-seekers and to study the role that psychosocial factors played in this process. Additionally, we examined the role that psychosocial factors and PTSD symptoms played in the mental well-being of this population. Lastly, we explored the development of PTSD symptoms for study participants between two time points.

Based on the literature, we put forward the following hypotheses:

H1: Traumatic experiences act as push factors forcing participants to flee their home countries.

H2: Travelling accompanied to Iceland by a parent or close family member is positively and significantly related to higher perceived social support. Furthermore, the role that age and perceived social support from parents and peers play in the vulnerability of exposure to SLEs will be tested.

H3: The internet and social media help inform participants about the country of resettlement (i.e., Iceland) and maintain connections with family members living abroad.

H4: High levels of perceived social support (particularly from parents), traveling accompanied, and a longer length of stay in Iceland are significantly and positively related to higher levels of perceived language proficiency.

H5: Psychosocial factors such as greater contact with family members abroad, higher levels of perceived social support (i.e., from parents and peers), higher levels of perceived Icelandic language proficiency, an easier asylum application process, and lower scores on the PTSD symptoms scale will be significantly and positively related to higher levels of mental well-being.

Methods

Participants

As seen in Table 1, 75 children and youth participated during the first assessment interview (i.e., time point one, TP1) (50 males and 25 females), and 43 participants agreed to be interviewed a second time (i.e., time point two, TP2) (24 males and 19 females). Participants mean age was 19.7 (minimum age 13 and maximum age 24, *SD* = 3.0) at time point one and 20.16 years (minimum age 14 and maximum age 25, *SD* = 3.1) at time point two. According to data from the Directorate of Immigration, the mean age of participants when they applied for asylum in Iceland was 18.2 (minimum age 11 and maximum age 24). Most participants lived in the capital area.

Only seven unaccompanied asylum-seeking children (UASC) participated at the start of this study (at TP1). However, as seen in Table 1, 11 other participants entered Iceland as UASC but were later identified as young adults after undergoing age assessment. Participants came from 25 different countries; the most frequently represented during time point one were: Kurdistan (*n* = 10), Somalia (*n* = 9), Afghanistan (*n* = 7), Iraq (*n* = 7), and Venezuela (*n* = 7). The remaining countries were Albania, Burkina Faso, Colombia, El Salvador, Gambia, Gaza, Ghana, Guinea, Iran, Nigeria, Pakistan, Palestine, Russia, Sudan, Syria, Tunisia, Turkey, Ukraine, Western Sahara, and Yemen. Most participants practiced Islam religion followed by Christianity. During time point two, most participants came from West Asia (i.e., the Middle East), followed by Latin America (see Table 1).

Table 1

Sociodemographic Characteristics of Participating During Times Point One and Time Point Two

	Time point one	Time point two
	All	All
	n = 75, % = 100	*n = 43, % = 100*
Age		
DI* age at arrival M (SD)	18.2 (3.04)	-
Age at interview M (SD)	19.7 (3.0)	20.16 (3.1)
Gender, n (%)		
Male	50 (66.7)	24 (55.8)
Female	25 (33.3)	19 (44.2)

Group type at asylum application		
UASC**	7 (9.3)	5 (11.6)
UASC but identified as youth by DI	11 (14.7)	2 (4.7)
Youth 18-24	27 (49.3)	22 (51.2)
Accompanied child	20 (26.7)	14 (32.6)
Age Assessment at asylum application		
Yes	11 (14.7)	4 (9.3)
No	64 (85.3)	39 (90.7)
Location of the country of origin, n (%)		
West Asia/Middle East	35 (46.7)	23 (53.5)
Latin America	14 (18.7)	8 (18.6)
East Africa	9 (12.0)	3 (7.0)
West Africa	8 (10.7)	4 (9.3)
Eastern Europe	5 (6.7)	3 (7.0)
North Africa	2 (2.7)	2 (4.6)
South Asia	1 (1.3)	-
Other***	1 (1.3)	-
Religion, n (%)		
Muslim	40 (54.1)	24 (55.8)
Christian	17 (23.0)	9 (21.0)
Other****	11 (14.9)	6 (14.0)
Unaffiliated	6 (8.1)	4 (9.3)
Asylum application status, n (%)*****		
Protection/refugee status	22 (29.3)	30 (69.8)
Subsidiary protection	19 (25.3)	-
Humanitarian permit	4 (5.3)	10 (23.3)
Appeal	2 (2.7)	-
In progress	27 (36.0)	1 (2.3)
Special connection	1 (1.3)	-

Citizenship	-	1 (2.3)
Negative	-	1 (2.3)
Traveled (un)accompanied, n (%)		
Alone	37 (49.3)	18 (41.9)
Accompanied	38 (50.7)	25 (58.1)

Note. *DI=Directorate of immigration. **UASC=Unaccompanied asylum-seeking child. ***Undocumented at birth. **** Santeria, Agnosticism, Humanity, Jehovah's Witness, and personal religion**.** *****Information from DI at TP1 and from participants at TP2.

Procedures

Invitation letters, written in five languages (i.e., English, Spanish, Farsi, Kurdish, and Arabic), were mailed to potential participants and their legal guardians from a list provided by the Directorate of Immigration. The letter informed potential participants about the study and encouraged them to contact the researchers if they required additional information or did not wish to participate. Social workers from reception municipalities (i.e., where asylum-seekers initially reside) promoted the study among potential participants. The interviewer (first author) and interpreters (when needed) contacted those who did not decline participation to answer questions and set up appointments. Some potential participants were not reachable (e.g., phones were disconnected, or they did not answer phone calls).

Participation required partaking in two assessment interviews. Participants and their legal guardians signed an informed consent form at the beginning of the first assessment interview; they could refrain from answering questions or terminate participation at any time, and no incentives were given for their involvement in the study. Interviews were not recorded to ensure confidentiality and because fewer people were expected to participate if they were. In the case of open-ended questions (e.g., “How did you first hear about Iceland?”), however, the interviewer wrote down participants' responses as precisely as possible. Moreover, some questions (e.g., “How much or little contact do you have with your family members living abroad?”), required rating answers on a four-point Likert scale. The interviewer had previously printed the scales (for all multiple-choice questions) accompanied by colored circles of increasing sizes, which made rating more explicit (e.g., the smallest circle represented “very little,” and the largest circle represented “very much”). Participants were then asked to point to their answer on the printed rating scales (e.g., “very little,” “rather little,” “rather much,” or “very much”). This idea was borrowed from the Reactions of Adolescents to Traumatic Stress scale (i.e., RATS) used in this study.

Recruitment and interviews were carried out between July 2020 and November 2021, and interviews (i.e., TP1 and TP2) were conducted approximately eight months apart (M = 7.93, SD = .99). Fewer participants were interviewed a second time (TP2) as some could not be contacted (e.g., did not answer), and others refused participation (e.g., were busy with work or school). During the first assessment interviews, 42.7% of interviews were performed in English, 32.0% with the help of an interpreter, 22.6% in Spanish, and 2.7% in Icelandic. During the second assessment interviews, 60.5% were conducted in English, 18.6% with the help of interpreters, 18.6% in Spanish, and 2.3% in Icelandic. The mean length of the first assessment interview was 74.2 minutes (SD = 22.1) and 63.4 minutes (SD = 13.6) for the second interview. Most participants chose to be interviewed at a private clinic, followed by their homes or a public location (e.g., public libraries and coffeehouses). The interviewer, an experienced clinical psychologist, could provide immediate psychological support if it was needed (although it was not proved necessary), and a free session with a mental health professional was offered following the interview.

This study was performed in line with the principles of the Declaration of Helsinki. Approval was granted by the Icelandic National Bioethics Committee (Ethics approval numbers: VSN-20-005 and VSN-20-005-V1).

Measures

Sociodemographic information and questions regarding contact with family abroad, social support, reasons for migration, Icelandic language proficiency, and the asylum process were asked via face-to-face interviews. Additionally, the Stressful Live Events Checklist (at TP1), the Reactions of Adolescents to Traumatic Stress scale (i.e., RATS) (at TP1 and TP2), and the short version of the Warwick–Edinburgh Mental Wellbeing Scale (i.e., SWEMWBS) (at TP2) were administered to participants following the face-to-face interviews.

Data concerning participants' dates of birth, dates of asylum applications, age assessment, and asylum application status (at TP1) were obtained from the Directorate of Immigration.

Sociodemographic Information

Participants were asked about their age, gender, country of origin, asylum application status, whom they traveled with, religion, and the municipality of residence.

The length of stay in Iceland was calculated by subtracting the date of the assessment interview from the day the asylum application was filed.

Social Support

The Perceived Parental Support (PPS) self-report scale measures adolescents' perception of parental support. This study used the PPS to assess perceived support from parents and peers. The PPS consists of five items rated on a 4-point Likert scale, ranging from one (very difficult) to four (very easy). Respondents are asked to rate how easy or difficult it is to receive the following from parents (or peers): caring and warmth, talks about personal affairs, advice about schoolwork or work, advice about other issues or projects, support with other things (assistance with things, in case of peers). Higher scores indicate greater perceived support (scores range from five to 20). Previous research demonstrated the construct validity and reliability of the scale using data from eight European cities (Kristjansson et al., 2010). In this study, the five items yielded Cronbach's Alpha values of $\alpha = 0.87$ (parental support) and $\alpha = 0.84$ (peer support) at time point one and $\alpha=0.86$ (parental support) and $\alpha = 0.76$ (peer support) at time point two.

Migration Reasons

Participants were asked the open-ended question, “Tell me the main reason why you (and your family) left your country?” Answers were then categorized in accordance with prior research in this field (Jensen et al., 2015; Montgomery, 2010; UNHCR, 2020). The categories were: safety issues; persecution; war; prejudice; injury, torture, disappearance, or death of a close family member (other than parent); death of a parent or a parent gone missing; physical abuse and or injury; forced eviction or displacement; poverty; sexual abuse; and domestic violence.

This question was omitted during the second assessment interview.

Stressful Life Events

The Stressful Life Events (SLEs) checklist was developed to assess whether an adolescent meets diagnostic criteria A1 (i.e., experiencing a traumatic event) for a diagnosis of PTSD according to the DSM-IV (Bean et al., 2006). It consists of 13 dichotomous items (yes or no) concerning traumatic events. Higher scores indicate a greater number of experienced SLEs (scores range from 0 to 13). Centrum '45 in the Netherlands validated the use of the instrument and translations, in multiple languages, with a culturally diverse population (https://www.centrum45.nl/). Centrum '45 approved the use of all translations of the SLEs in the current study (Gerda Heslinga, personal communication, April 8, 2019). The SLEs checklist was not administered during time point two.

The Internet and Social Media

Knowledge of Iceland Before Arrival. Participants were asked the open-ended question,“Tell me how you first heard about Iceland?” Answers were organized into the following themes: via someone who told them

about Iceland, social relations who were living in Iceland or who had previously lived in Iceland, the internet, media coverage, the school, or did not know about Iceland before arrival. This question was omitted during time point two.

Contact with Family Abroad. Participants were asked whether they had family members living abroad and which family members lived abroad. Additionally, they were asked to rate on a four-point Likert scale ranging from one (very little) to four (very much), "How much or little contact do you have with your family members living abroad?" Furthermore, participants were asked, "How do you stay in contact with your family members living abroad (e.g., WhatsApp, Viber, Videogames, Instagram, Snapchat, Facebook, Facetime, Messenger, Skype, phone, etc.)?"

Icelandic Language Proficiency

Participants were asked to rate, on a 4-point Likert scale, ranging from one (very little) to four (very much), "How much or little Icelandic do you speak?" and "How much or little Icelandic do you understand?" These items were found to be significantly correlated; r (73) = 0.76, p = <.001 (TP1) and r (43) = 0.74, p = <.001 (TP2). Consequently, the perceived Icelandic proficiency scale was created by combining these two items. Scale values range from two to eight; higher scores represent greater perceived Icelandic proficiency.

At time point one, the item perceived Icelandic proficiency was split and transformed into poor Icelandic proficiency (scores from two to three) and greater Icelandic proficiency (scores from four to eight).

The Asylum Process

During time point two, participants were asked to rate on a four-point Likert scale ranging from one (very difficult) to four (very easy), "How easy or difficult has it been for you (and your family) to apply for asylum/refugee in Iceland?"

Post-Traumatic Stress Disorder

The Reactions of Adolescents to Traumatic Stress (RATS) self-report measures DSM-IV post-traumatic stress disorder symptoms. It consists of 22 items rated on a 4-point Likert scale, ranging from one (not) to four (very much). Scores range from 22 to 88 (higher scores indicate more PTSD symptoms) (Bean et al., 2004). The suggested cut-off total score for caseness is 50 (60th percentile). The RATS is a reliable and valid instrument for assessing post-traumatic stress reactions of adolescents of culturally diverse backgrounds (Bean et al., 2006). The Cronbach's Alpha values obtained in this study were α = .86 (at TP1) and α = .90 (at TP2).

Mental Well-being

The Warwick–Edinburgh Mental Wellbeing Scale (WEMWBS) self-report measure was developed to assess the mental well-being of youth and adults. The short version of the WEMWBS (i.e., SWEMWBS) consists of seven items rated on a 5-point Likert scale, ranging from one (none of the time) to five (all of the time). Higher scores indicate greater mental well-being (scores range from 7 to 35). The suggested cut-off scores for positive well-being range from 27.5 to 35 and from seven to 19.5 for negative well-being (Shah et al., 2021). The (S)WEMWBS is an appropriate instrument to measure the mental well-being of adolescents and adults in various European countries (Haver et al., 2015; Koushede et al., 2019). The scale is a valid and reliable tool for measuring mental well-being in diverse populations (Stewart-Brown et al., 2011). The Cronbach's Alpha value obtained in this study was $\alpha = .86$.

The SWEMWBS was administered to participants only during the second assessment interview.

Data Analysis

Data were quantitatively analyzed using IBM SPSS statistics, version 27. Descriptive analysis, Pearson correlations, Spearman correlations, t-tests, paired sample t-tests, multiple regressions, and logistic regressions were conducted to test hypotheses. Assumptions for all data analysis were examined and were met.

Results

Sociodemographic Characteristics

First Assessment Interview

As seen in Table 1, over half of the participants had received protection or subsidiary protection, while 38.7% were still awaiting a decision on their application claim. Thirty-seven participants travelled alone to Iceland (49.3%), while 38 travelled accompanied by a parent or close family member (50.7%).

Second Assessment Interview

On average, participants lived in Iceland for a little over two and a half years (M = 32.63 months, SD = 13.69) when the second assessment interview occurred. By this time, most participants had received refugee status (69.8%), followed by a humanitarian permit, while only one participant was awaiting a decision on their application claim (see Table 1).

Social Support

First Assessment Interview

Children and youth who traveled alone (N = 37, M = 12.27, SD = 5.75) experienced significantly less perceived parental support than those who travelled accompanied to Iceland (N = 38, M = 17.03, SD = 2.83) (t

$_{(52.21)}$ = -4.53, p < .001). However, there was no significant difference between those who traveled to Iceland alone (M = 14.51, SD = 4.21) or accompanied (M = 14.71, SD = 5.07) in the level of perceived support from peers (t $_{(73)}$ = -.18, p = .855).

Second Assessment Interview

Perceived parental support remained the same between time point one (N = 43, M = 15.0, SD = 5.0) and time point two (N = 43, M = 15.8, SD = 4.4) ($t_{(42)}$ = -1.23, p = .23). Likewise, there was not a significant difference between participants' perceived peer support between the first (M = 14.8, SD = 4.6) and second time points (N = 43, M = 15.4, SD = 3.8) ($t_{(42)}$ = -.72, p = .47).

Migration reasons – First Assessment Interview

As shown in Table 2, most participants stated multiple reasons for fleeing their country of origin. The most common reasons were safety, persecution, war, and the disappearance or death of a parent or close family member (i.e., 31 participants).

Table 2

Reasons for Leaving the Country of Origin

"Tell me the main reason why you (and your family) left your country?"	All
	N: 75
	n (%)
Safety issues	64 (85.3)
Persecution	30 (40.0)
War	29 (38.7)
Prejudice	17 (22.7)
Injury, torture, disappearance, or death of a close family member (other than parent)	16 (21.4)
Death of a parent or parent went missing	15 (20.0)
Physical abuse/injury	14 (18.7)
Forced eviction or displacement	14 (18.7)
Poverty	10 (13.3)
Sexual abuse	4 (5.3)

Domestic violence	2 (2.7)

Note. Participants could provide more than one reason for fleeing their home countries.

Stressful Live Events – First Assessment Interview

As depicted in Table 3, the most common SLEs experienced by participants were life-threatening events where they thought they were in danger (77.3%) or someone else was in danger (72.0%), war (72.0%), the death of someone they cared about (68.0%) and experiencing (68.0%) or witnessing violence (66.2%). Moreover, 47.3% experienced drastic changes in their family during the year prior to the first assessment interview.

Table 3

Stressful Life Events Checklist

	All
	N: 75
	n (%)
SLE1 - Have there been drastic changes in your family during the last year?	35 (47.3)
SLE2 - Have you ever been separated from your family against your will? (By a stranger, police officer, soldier, fleeing your homeland)	23 (30.7)
SLE3 - Has someone died in your life that you really cared about?	51 (68.0)
SLE4 - Have you had a life-threatening medical problem?	19 (25.7)
SLE5 - Have you been involved in a serious accident? (For example, involving a car)	26 (35.1)
SLE6 - Have you ever been involved in a disaster? (For example, a flood, hurricane, fire, tornado, avalanche, earthquake, hostage situation, chemical disaster?)	33 (44.0)
SLE7 - Have you ever experienced a war or an armed military conflict going on around you in your country of birth?	54 (72.0)
SLE 8 - Has someone ever hit, kicked, shot at or some other way tried to physically hurt you?	51 (68.0)
SLE9 - Did you ever see it happen to someone else in real life? (Not just on television or in a film)?	49 (66.2)

SLE10 - Has someone ever tried to touch your private sexual parts against your will or forced you to have sex?	16 (21.6)
SLE11 - Did you experience any other very stressful life event where you thought that you were in great danger?	58 (77.3)
SLE12 - Did you experience any other very stressful life event where you thought that someone else was in great danger?	54 (72)
SLE13 - Not listed above but you found the event very frightening:	8 (10.7)

Note. Participants could mark yes with as many questions as were true for them.

Less parental support (r = -.368, p < .001) and older age when the asylum application was submitted (r = .25, p = .028) were related to a higher number of experienced SLEs. A multiple regression analysis was used to explore the contribution of age at the time the asylum application was filed and perceived parental support toward predicting the number of SLEs. The analysis indicated the two predictors explained 17% of the variance (R^2 = .17, $F_{(2,72)}$ = 7.25, p < .001). However, only perceived parental support significantly contributed to the prediction (β = -.16, p = .004). Age did not make a significant independent contribution to the prediction when controlling for perceived parental support (β = 0.15, p < .001).

The Internet and Social Media

Knowledge of Iceland Before Arrival

Most participants (42.6%) first heard about Iceland from someone who told them about the country in person or through social media. Furthermore, 13.3% of these social relations lived (or had previously lived) in Iceland. Also, 18.7% first learned about the country by browsing the internet, and only 14.7% said they knew nothing about Iceland before arrival. Participants also reported having heard about Iceland through school and media coverage (e.g., news about Iceland, the Icelandic national football team, and Icelandic music).

Contact with Family Members Living Abroad

First Assessment Interview. Seventy-one participants (94.7%) had family members living abroad, of which 63.0% were parents and or siblings. Thirty-eight (50.7%) said they had "rather much" or "very much" contact with them. Most connections were maintained through social media (e.g., 56% used WhatsApp, 9.3% Messenger, 6.7% Facebook, and 2.7% used Instagram), and only five maintained contact with family members via phone calls.

Second Assessment Interview. Forty participants, or almost all (93.0%), had family members living abroad, of which 60.6% were parents and or siblings. Eighteen participants (42.9%) had "rather much" or "very

much" contact with them. Most connections were maintained through social media (e.g., 62.8% used WhatsApp, 14.0% used Facebook, and 11.6% Messenger), and only four stayed in contact with family members via phone.

Perceived Icelandic Language Proficiency

First Assessment Interview

Younger age at the time the asylum application was submitted (r = -.45, p < .001), a longer length of stay in Iceland (r = .63, p < .001), and greater perceived parental support (r = .25, p = .03) were related to greater perceived Icelandic proficiency. Additionally, on average, children and youth who traveled accompanied to Iceland perceived greater Icelandic proficiency (N = 38, M = 4.13, SD = 1.63) than those who traveled alone (N = 37, M = 3.3, SD=1.43) ($t_{(73)}$ = -2.35, p = .02).

Multiple logistic regression was performed to ascertain the effects of these variables on the likelihood that participants had greater Icelandic proficiency (during T1). The logistic regression model was statistically significant $\chi^2_{(4)} = 27.53$, p < .001, and explained 42.9% (Nagelkerke R^2) of the variance in Icelandic proficiency and correctly classified 74.6% of cases. Those who traveled accompanied by a parent or caregiver to Iceland were 4.11 times more likely to perceive greater Icelandic proficiency than those who traveled alone. Increasing length of stay was also significantly associated with an increased likelihood of having greater Icelandic proficiency.

The Asylum Process – Second Assessment Interview

Eighteen participants (41.9%) found the experience of seeking asylum very difficult, while five (11.6%) found the experience to be rather difficult, 13 (30.2%) rather easy, and seven (16.3%) very easy.

PTSD symptoms – First and Second Assessment Interviews

The mean scores on the PTSD scale (i.e., RATS) were 48.0 (N = 43, SD = 10.0) at time point one and 45.4 (N = 43, SD = 13.4) at time point two. Paired t-test scores revealed that PTSD symptoms scale mean scores did not significantly change between time point one and time point two ($t_{(42)}$ = 1.64, p = .11). However, 51.2% of participants scored above the PTSD scale's cut-off score at time point one and 35% scored above the cut-off score at time point two.

Mental Well-being – Second Assessment Interview

The scores on the mental well-being scale (i.e., SWEMWBS) were in the average range (M = 26.14, SD = 5.86) but slightly below the cut-off score for positive well-being. Greater perceived parental support (r = .36, p = .02) and greater perceived peer support (r = .40, p = .009) were related to greater mental well-being (as

at T2). Moreover, lower scores on the PTSD symptoms scale (i.e., RATS) (r = -.38, p = .01) were related to higher levels of mental well-being (see Table 4).

Table 4

Spearman Correlations between Contact with Family Abroad, Parental Support, Peer Support, Icelandic Proficiency, the Experience of Seeking Asylum, Well-being, and PTSD Symptoms during Time Point Two

Variables	1	2	3	4	5	6	7
1. Contact with family abroad	-						
2. Parental support	.18	-					
3. Peer support	.43**	.30*	-				
4. Icelandic proficiency	-.15	.16	.17	-			
5. The asylum process	.02	.08	.02	.04	-		
6. Well-being	.16	.36*	.40**	-.10	.20	-	
7. RATS	-.06	-.25	.03	-.05	-.26	-.38**	-

Note. RATS: PTSD symptoms scale. *Significant at the 0.05 level (2-tailed). **Significant at the 0.01 level (2-tailed).

A multiple regression analysis was used to explore the contribution that perceived peer support, perceived parental support, and PTSD symptoms made toward predicting scores on the mental well-being scale. The analysis indicated the three predictors explained 38% of the variance (R^2 = .38, $F_{(3,38)}$ = 7.83, p < .001). However, it was perceived peer support (β = .61, p = .006) and PTSD symptoms scores (β = -.19, p = .002) that made a significant contribution to the prediction. Perceived parental support did not make a significant independent contribution to the prediction when controlling for the other two variables (β = .17, p = 0.36).

Discussion

The present study examined the migration experience of children and youth who arrived in Iceland as asylum-seekers, the role that psychosocial factors played at the different stages of their migration journeys, and their mental well-being. To the authors' knowledge, this is one of the few studies exploring these issues in Iceland. Iceland is a remote Island, and its geographical location makes it challenging to reach; however, Iceland has faced an enormous influx of forced migrants in the past few years. Furthermore, the Icelandic language is complex and only spoken by a few people worldwide, which makes it difficult and less desirable to learn. These unique conditions deserve studying the circumstances of children and youth fleeing to Iceland.

Similar to other studies, traumatic experiences such as persecution, war, and the disappearance or death of a parent or close family member were common push factors forcing participants to flee their home countries (Jensen et al., 2015; Montgomery, 2010; UNHCR, 2020). As expected, traveling accompanied to Iceland was related to significantly higher levels of perceived parental support than traveling alone. Moreover, parental support was significantly related to a lesser vulnerability of exposure to SLEs. These results suggest that parental support acted as a protective factor shielding these children and youth against exposure to traumatic events. These results are in accordance with research indicating that unaccompanied asylum-seeking children are at greater risk in terms of both the number of physical and psychologically traumatic experiences (Derluyn et al., 2009; Wiese & Burhorst, 2007). Although SLEs are common among child and youth forced migrants, psychosocial factors such as social media, social support, and proficiency in the resettlement country's language can help enhance the lives of these individuals.

As anticipated, for study participants, the internet and social media provided a source of information about Iceland before arrival (mainly through word-of-mouth). These results comply with research suggesting that in making decisions about where to migrate, social media information originating from present social relations and personal experience is considered particularly trustworthy (Dekker et al., 2018). Moreover, social media helped participants remain in touch with family members abroad, suggesting that young migrants become mobile in physical and virtual spaces, allowing them to maintain connections with family and friends and create closeness in the distance (Doná, 2015; Veale & Doná, 2014). Contact with family members abroad might, in turn, help preserve these individuals' first language and contribute to the subsequent acquisition of the resettlement country's language.

Proficiency in the language of the resettlement country is an essential factor in the adaptation of children and youth refugees. In the current study, higher levels of perceived support from parents, traveling accompanied by a parent or close family member, and a longer stay in Iceland were related to increased perceived Icelandic language proficiency. Other studies have also found, for instance, that support from mothers and the extended family helps protect children's vocabulary development against unfavorable conditions (Baydar et al., 2014). Additionally, social support from parents and family members can help preserve children's mother tongue (i.e., first language), consequently playing a vital role in their development, education, and second-language learning (Yazici et al., 2010). Besides language proficiency, the asylum process can also negatively impact the mental well-being of children and young forced migrants.

The process of seeking asylum in Iceland was difficult for half of the study participants, similar to other studies (Guðmundsdóttir et al., 2018; Nielsen et al., 2008). However, a positive asylum process experience was not related to greater mental well-being as hypothesized. Conversely, studies have suggested that the asylum process is related to psychological problems among child and adolescent refugees and asylum-seekers (Braun-Lewensohn & Al-Sayed, 2018; Nielsen et al., 2008). Likewise, greater perceived Icelandic proficiency was not related to greater mental well-being, as hypothesized. Nevertheless, study results revealed that social support and PTSD symptoms were related to mental well-being.

Post-traumatic stress and other mental health problems are prevalent among refugee and asylum-seeker children (Blackmore et al., 2019). Similarly, for participants in this study, mean PTSD symptom scores were high and remained persistent between time points one and two, analogous to other studies (Jensen et al., 2019; Reavell & Fazil, 2017; Vervliet et al., 2014). However, at time point two, less severity of PTSD symptoms and higher levels of social support were related to greater mental well-being. Results are in line with studies suggesting that greater perceived support is associated with greater well-being for children and adolescents in general (Chu et al., 2010), and peer support can help prevent the potential effects of trauma exposure (Authors, 2022; Sierau et al., 2019).

Several limitations should be considered when interpreting the current study results. One limitation is the self-reporting nature of the study, where only children and youth served as informants, and caregivers were not involved. Another limitation is that fewer participants remained in the study during the second assessment interview, making follow-up with the participants difficult. This study's dropout rate might be linked to the high mobility rates for this vulnerable migrant group (Keles et al., 2018). Moreover, psychosocial factors' role may differ in other countries' social and geographical contexts. Therefore, attention should be paid when generalizing results to settings that are culturally and geographically different from Iceland.

However, this study has several strengths. First, this is one of the few studies examining the migration experiences of children and youth seeking refuge in Iceland, which allowed us to study the journeys of these individuals in a unique setting. Furthermore, as a similar percentage of children and youth traveling alone and accompanied to Iceland partook in this study at time point one, we could directly compare the two groups. Moreover, there was very little missing data since difficulties in understanding could be resolved as the assessment took place in an interview-like setting with the help of interpreters when required.

In conclusion, the results demonstrate the importance of social support for a positive migration experience and adaptation process for vulnerable children and youth migrants. Although traumatic events

prompt children and young forced migrants to flee their homes, they possess resilience. They are resolute in maintaining supportive relationships with family members, despite being separated by a great distance. They are also able to build new relationships in the receiving country (i.e., Iceland) and, in turn, obtain social support. Social support from parents is essential in promoting first-language competence, which might, in turn, ease the acquisition of the resettlement country's language. Moreover, peer social support helps boost their mental well-being. The study results attest to the importance of encouraging children and young migrants to maintain relationships with family members near and far and to build new relationships that offer support. The findings also demonstrate the importance of providing these individuals with access to early psychological health services, such as phycological assessment and intervention, which can prove beneficial to their mental well-being and subsequent adaptation.

Declarations

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Competing Interests

The authors have no competing interests to declare that are relevant to the content of this article.

Ethics Approval

This study was performed in line with the principles of the Declaration of Helsinki. Approval was granted by the Icelandic National Bioethics Committee (Ethics approval numbers: VSN-20-005 and VSN-20-005-V1).

Consent to participate

Informed consent was obtained from all participants, and children's legal guardians, included in the study.

Authors' contributions

PC designed the study under the supervision of BBÁ. Material preparation, data collection, and analysis were performed by PC. The first draft of the manuscript was written by PC, and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

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Paper II

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ORIGINAL ARTICLE

Stressful life events, psychological symptoms, and social support of children and young asylum-seekers in Iceland

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Abstract

Background: Children and young asylum-seekers are often exposed to stressful life events (SLEs) and risk developing psychological symptoms. However, risk and protective factors can positively and negatively influence this vulnerable group's mental health. *Aims:* To examine the SLE experiences and psychological symptoms of children and youth who seek refuge in Iceland. And to study the role that gender, travelling (un)accompanied and perceived social support play in the development of psychological symptoms for this population. *Methods:* Participants were 75 children and youth of ages 13 to 24 years who sought asylum in Iceland (M = 19.7, SD =3.0, 66.7% male). Sociodemographic and social support data were collected via face-to-face interviews, with the help of interpreters when required, while SLEs, post-traumatic stress, depression, anxiety and behavioural symptoms measures were administered to participants. *Results:* The results indicated that participants who travelled alone to Iceland had experienced more SLEs than those who travelled accompanied. SLE experiences were associated with post-traumatic stress disorder (PTSD) and other psychological symptoms. Results also revealed that SLE and perceived peer support played a significant role in predicting PTSD symptoms. ***Conclusions:*** **Children and young asylum-seekers are exposed to a high number of SLEs, which increases their risk of developing psychological problems. This potential risk underlines the need for early assessments and intervention. Moreover, higher levels of social support were related to less severe PTSD symptoms, suggesting that social resources act as protective factors for these children and youth in helping them cope with SLEs.**

Keywords: *Youth, social support, asylum-seekers, stressful life events, PTSD, psychological symptoms*

Background

The current Russia–Ukraine war, Venezuela's humanitarian crises and the conflicts in Afghanistan, South Sudan, Syria and Yemen, to name a few, have created a global refugee crisis of unprecedented scale. In 2021, among the 89.3 million people who were forcibly displaced, an estimated 36.5 million (41%) were children living as internally displaced, refugees or asylum-seekers across the globe [1]. During the first four months of 2022, Iceland received 1332 asylum applications, of which 27% were from minors mainly travelling accompanied. In comparison, 181 people sought refuge in Iceland during the first four months of 2018 [2]. According to studies conducted in European countries, children and youth forced to flee are often exposed to potentially traumatic experiences, and many develop psychological problems [3–5]. However, research on this topic is sorely lacking in Iceland, and there are gaps in the literature regarding the role that risk and protective factors play in exposure to stressful life events (SLEs) and psychological symptoms development for this vulnerable population [4].

Children and youth asylum-seekers often report having experienced SLEs before arrival in the receiving country, particularly those who travel unaccompanied [4,5], the most prevalent SLE experiences

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being life-threatening events, physical abuse, death of a close relative, witnessing violence, and war [5,6]. In the current study, the term asylum-seeker is defined as a migrant who claims to have been forcibly displaced and applies for refugee status in a receiving country (e.g. Iceland). The role gender plays in the vulnerability to exposure to traumatic events is unclear. Recent studies have indicated that male children and young migrants on the move are generally more at risk of abuse and exploitation and experience significantly more traumatic events than females [7]. Conversely, others have suggested that female refugees are at greater risk of experiencing gender-related traumatic experiences, such as sexual violence [8], increasing their risk of developing post-traumatic stress disorder (PTSD) [9].

SLEs and conflict are related to mental health problems in adolescents and young adults in general [10]. Traumatic experiences can lead to the development of PTSD and other mental health illnesses. Unaccompanied asylum-seeking children belong to the most vulnerable group of children who seek refuge and report symptoms of PTSD and other psychological symptoms (i.e. anxiety, depression and behavioural problems) [11,12]. However, both unaccompanied and accompanied refugee children and youth are at risk of developing mental health problems [4,11]. Accompanied refugee children living with a parent diagnosed with PTSD are potentially vulnerable to the intergenerational transmission of psychiatric disorders [13]. Furthermore, being from a foreign background might also increase the vulnerability to developing mental health issues. Research has shown that in Europe, non-European migrant children and adolescents present more emotional and behavioural problems than native European children [14].

Although adverse experiences might affect their mental health, children and young refugees can also experience positive well-being following traumatic experiences [15]. Social support is an essential factor for young people's mental health [16]. For refugee minors, social support and family security are related to reduced rates of PTSD and depression [17]. Inversely, factors such as low social support and the marginalization acculturation strategy (i.e. rejecting the heritage culture and avoiding interaction with the mainstream society) can lead to poor psychological well-being [18,19]. Moreover, for unaccompanied refugee minors, lower peer social support increases the association between SLEs and anxiety symptoms [20].

Mental health problems have been found amongst migrant youth in Iceland [21], although research on mental health issues concerning children and youth who seek asylum in Iceland is absent. Nonetheless, a qualitative study reported that accompanied asylum-seeking children and youth in Iceland experienced invisibility during the asylum process and were not encouraged to express their opinions on matters of importance to them, such as their mental health and adaptation in Iceland [22].

Aims and hypotheses

Against this background, this study sought to address questions that overcome some of the gaps in the literature. First, there is conflicting evidence regarding the relationship between gender and exposure to SLEs for children and young asylum-seekers. Some research suggests a higher risk of SLEs for males, while others for females. Second, there is disagreement concerning the risk of exposure to SLEs and psychological symptoms' development for children and young asylum-seekers travelling alone compared with those travelling accompanied, with some evidence suggesting that unaccompanied children and youth are more at risk. Last, this study looked at the role that factors such as SLEs, perceived parental support and perceived peer support play on the psychological symptoms' development in children and young asylum-seekers in Iceland. Hence, the following hypotheses were put forward:

Hypothesis 1. The participants will, on average, have a high prevalence of SLEs, with those who travelled alone to Iceland reporting a higher prevalence of SLEs than those who travelled accompanied. Furthermore, gender differences will be tested regarding the prevalence of SLEs.
Hypothesis 2. The participants will, on average, have high levels of PTSD symptoms and other psychological symptoms (i.e. anxiety, depression and externalizing symptoms), with those who travelled alone to Iceland reporting significantly higher levels of PTSD and psychological symptoms than those who travelled accompanied.
Hypothesis 3. A higher number of SLEs will be significantly and positively related to higher levels of PTSD and other psychological symptoms.
Hypothesis 4. Less perceived parental support and less perceived peer support will be significantly and negatively related to higher levels of PTSD and other psychological symptoms.

Method

Participants

Participants were 75 children and youth of ages 13 to 24 years (M =19.7, SD = 3.0), 50 males and 25 females. Thirty-eight participants travelled to Iceland

accompanied by a family member or legal guardian (50.7%), while 37 travelled alone (49.3%). Participants came from 25 different countries: 37 from the Middle East and North Africa, 17 from Sub-Saharan Africa, 14 from Latin America, five from Eastern Europe, one from South Asia, and one was undocumented at birth.

The mean number of months participants had lived in Iceland was 23.5 (SD = 14.5). Most participants lived in the capital area when the assessment interview took place.

Procedures

The Directorate of Immigration (DI) provided the researchers with 288 names and phone numbers of children (and their legal guardians) and youth who sought asylum in Iceland between 2016 and 2020. Subsequently, invitation letters were sent to potential participants, written in five languages (i.e. English, Spanish, Farsi, Kurdish and Arabic), and only a few refused participation. Social workers and the primary researcher contacted potential participants by phone, in random order, to answer questions and set up appointments. However, some potential participants were unreachable (e.g. phone numbers were missing or disconnected). Recruitment and interviews, along with assessment, were carried out between July 2020 and March 2021. All 75 recruited participants completed the study.

Participants and legal guardians signed a written informed consent form before the assessment interview took place and could refrain from answering questions or terminate participation during the duration of the study. Participation was anonymous, and no incentives were given for taking part in the study. Participants could elect where the data collection took place; most chose a private mental health clinic, while the rest preferred to meet at their homes or public locations. Data on sociodemographic information and perceived peer and parental social support (i.e. Perceived Parental Support Scale and peer version) were collected via face-to-face interviews, with the help of interpreters when required; while SLEs and mental health measures (i.e. Stressful Life Events Checklist, the Reactions of Adolescents to Traumatic Stress self-report, and the Hopkins Symptom Checklist-37 for Adolescents) were administered to participants following the face-to-face interviews.

The first author of this study, a clinical psychologist, conducted the assessment interviews and provided immediate psychological support when required. Participants were offered a free session with an impartial mental health professional following the interview, but no one requested this service. Most assessment interviews were performed in English, 32% with the help of an interpreter, 22.6% in Spanish and 2.7% in Icelandic. Interviews were not audio-recorded as it was expected that fewer people would participate if they knew they were being recorded.

The study received ethical approval from the Icelandic National Bioethics Committee and the Data Protection Authority in May 2020 (VSN-20-005).

Measures

Sociodemographic data. Demographic data were collected from assessment interviews with participants, such as age, gender, country of origin, date of arrival in Iceland and whom they travelled with to Iceland. Asylum data regarding application date and status were collected from the DI's database.

SLEs. The stressful life events checklist measures whether an adolescent meets diagnostic criteria A1 (i.e. experiencing a traumatic event) for a diagnosis of PTSD according to the *Diagnostic and Statistical Manual of Mental Disorders* fourth edition (DSM-IV) [23]. It consists of 13 'yes' or 'no' items regarding potential traumatic events related to loss, conflict and violence. Scores on the checklist range from zero to 13, and higher scores represent a greater number of SLEs.

PTSD. The Reactions of Adolescents to Traumatic Stress (RATS) self-report measures symptoms of PTSD according to DSM-IV. It consists of 22 items on a four-point Likert scale, ranging from 1 (*not*) to 4 (*very much*). Higher scores indicate more PTSD symptoms; scores range from 22 to 88. The suggested cut-off total score for caseness is 50 (60th percentile) [23]. The RATS is a reliable and valid instrument for assessing post-traumatic stress reactions of culturally diverse adolescents [24]. The Cronbach's alpha value obtained in this study was $\alpha = 0.86$.

Psychological symptoms. The Hopkins Symptom Checklist-37 for Adolescents (HSCL-37A) measures anxiety, depression, and externalizing (behaviour) symptoms. The HSCL-37A consists of 37 items on a four-point Likert scale, ranging from 1 (*never*) to 4 (*always*). Higher scores indicate greater difficulties; scores range from 37 to 148. The suggested HSCL-37A scale's cut-off score for caseness is 69 (60th percentile) [25]. The validity and reliability of the HSCL-37A have been demonstrated with culturally diverse adolescent populations [26]. The Cronbach's alpha value obtained in this study was $\alpha = 0.95$.

Table 1. PTSD and psychological symptoms' means, standard deviations, cut-off scores and mean comparisons between participants who travelled alone and accompanied to Iceland.

	Total $N = 75$		Accompanied $n = 38$	Alone $n = 37$	Mean comparisons
	M (SD)	Above cut-off *n* (%)	*M* (SD)	*M* (SD)	*t*-test score (df)
PTSD	48.41 (11.20)	40 (53.3%)	48.21 (10.42)	48.61 (12.08)	$t\ (73) = 0.16$*
Psychological symptoms	65.66 (19.00)	29 (38.7%)	68.07 (18.08)	63.18 (19.83)	$t\ (73) = -1.12$*

PTSD symptoms scale (i.e. RATS), psychological symptoms scale (i.e. HSCL-37A).
**p>0.05*
PTSD: post-traumatic stress disorder; RATS: Reactions of Adolescents to Traumatic Stress; HSCL-37A: Hopkins Symptom Checklist-37 for Adolescents

In the current study, the item 'loss of sexual interest' was considered inappropriate for younger adolescents and was omitted and scored as missing for nine participants.

Social support. The Perceived Parental Support (PPS) scale measures adolescents' perception of parental support. The PPS was adapted to measure perceived peer support in the current study. The PPS asks responders to rate, on a five-point Likert scale, how easy or difficult it is for them to receive the following from their parents (or peers): 'caring and warmth, talks about personal affairs, advice about schoolwork/work, advise about other issues, and support with other things'. Scores on the scale range from 5 to 20, and higher scores represent greater perceived support. Previous research has demonstrated the construct validity and reliability of the scale. The scale was validated using data from eight European cities; the Cronbach's alpha varied from $\alpha = 0.77$ to $\alpha = 0.87$ [27]. In the current study, combining the five items yielded a Cronbach's alpha of $\alpha = 0.87$ regarding parental support and $\alpha = 0.84$ regarding peer support. In this study, PPS parental and peer scale questions were asked of participants in an interview-like format.

Centrum'45 (https://www.centrum45.nl/) approved the use of all translations of the SLEs checklist, RATS and HSCL-37A in the current study (Gerda Heslinga, personal communication, 8 April 2019).

Analyses

Data were analysed using IBM SPSS statistics, version 27. Descriptive analyses were conducted to evaluate demographic characteristics. Pearson correlations and multiple regression analyses were conducted to test hypotheses. Assumptions for all data analysis were examined and met.

Results

The mean number of SLEs experienced by participants was 6.44 (SD = 2.53). Those who travelled alone (n=37, M= 7.03, SD=2.37) experienced significantly more SLEs than participants who travelled accompanied to Iceland (n=38, M= 5.87, SD=2.58) ($t_{(73)} = 2.02$, $p<0.05$). There was not a significant difference between females ($n = 25$, $M = 6.24$, SD = 2.44) and males ($n = 50$, $M = 6.54$, SD = 2.60) in the prevalence of experienced SLEs ($t_{(73)} = -0.48$, $p = 0.63$).

Table 1 provides an overview of PTSD and psychological symptoms and compares symptoms scores for children and youth asylum-seekers who travelled alone and accompanied to Iceland. Mean total scores for PTSD symptoms and psychological symptoms were in the average range. However, 53.3% of participants scored above the cut-off score for PTSD symptoms (measured by the RATS) and 38.7% for total psychological symptoms (measured by the HSCL-37A). As seen in Table 1, *t*-test results revealed no significant differences in levels of PTSD symptoms and psychological symptoms between participants who travelled alone to Iceland and those who travelled accompanied.

As seen in Table 2, the number of experienced SLEs was found to be significantly and positively related to PTSD symptoms ($r = 0.44$, $p<0.01$) and psychological symptoms ($r = 0.30$, $p<0.01$).

Less perceived parental support ($r = -0.23$, $p<0.05$) and less perceived peer support ($r = -0.33$, $p<0.01$) were significantly and negatively related to higher levels of PTSD symptoms but not to other psychological symptoms (see Table 2). There was a high and significant correlation between PTSD symptoms and other psychological symptoms ($r = 0.81$, $p<0.01$).

A multiple regression analysis was used to explore the contribution that perceived parental support,

Table 2. Correlations between parental support, peer support, SLEs and psychological symptoms.

Variables	1	2	3	4	5
1. Parental support	–				
2. Peer support	0.10	–			
3. SLE	−0.34**	−0.04	–		
4. RATS	−0.23*	−0.33**	0.44**	–	
5. HSCL-37A	−0.13	−0.16	0.30**	0.81**	–

*Significant at the 0.05 level (two-tailed).
**Significant at the 0.01 level (two-tailed).
SLEs: Stressful Life Events Checklist; RATS: Reactions of Adolescents to Traumatic Stress; HSCL-37A: Hopkins Symptom Checklist-37 for Adolescents

perceived peer support, and the number of SLEs made towards the prediction of PTSD scale scores (i.e. RATS). The analysis indicated the three predictors explained 30.0% of the variance ($R^2 = 0.30$, $F_{(3,71)} = 10.16$, $p<0.01$), with perceived peer support ($\beta = -0.75$, $p<0.01$) and the number of experienced SLEs ($\beta = 1.82$, $p<0.01$) making significant contributions to the prediction. Perceived parental support did not make a significant independent contribution when controlling for perceived peer support and SLEs ($\beta = -0.14$, $p = 0.56$).

Likewise, a multiple regression analysis was conducted to explore the contribution that perceived parental support, perceived peer support, and the number of SLEs made towards predicting psychological symptoms' scale scores (i.e. HSCL-37A). The analysis indicated that the three predictors explained 11.3% of the variance ($R^2 = 0.11$, $F_{(3,71)} = 3.01$, $p<0.05$), with only SLEs ($\beta = 2.16$, $p<0.05$)making a significant contribution to the prediction. Perceived parental support ($\beta = -0.058$, $p = 0.90$) and perceived peer support ($\beta = -0.62$, $p = 0.19$) did not make significant independent contributions to the prediction when controlling for the other two variables.

Discussion

The current findings confirm the first hypothesis and support the suggestion that children and youth asylum-seekers are exposed to a high number of SLEs [4–6]. Participants in the study experienced an average of 6.44 SLEs (SD = 2.53, range 1–13); in comparison, Icelandic adolescents and youth have reported a lower mean number of experienced events (ranging from 4.18 to 4.78) from a list of 29 undesirable life events [28]. Moreover, similar to other studies, participants who travelled alone to Iceland reported significantly more SLEs than those who travelled accompanied [4].

In the current study, gender differences regarding the prevalence of experienced SLEs were not found. Research has suggested that female refugees are more exposed to gender-related traumatic events (e.g. sexual abuse) than male refugees, increasing their risk of PTSD [8,9]. These results might suggest that for children and youth asylum-seekers, it is not the number of traumatic events that matters but the type of SLEs they have experienced. Future research should focus on SLEs type and severity, not the number of events.

As stated in the second hypothesis, the results indicated high levels of psychological distress among children and youth asylum-seekers in Iceland (PTSD symptoms 53.3%, and other psychological symptoms 38.7%). These results are comparable to studies examining the prevalence of mental disorders in young refugees and asylum-seekers in European countries [3]. In comparison, the prevalence of mental disorders among young people in Europe is 15.5%, with anxiety disorders being the most common mental disorder (7.9%) [29]. In the current study, those who travelled alone to Iceland did not report significantly higher levels of PTSD symptoms and other psychological symptoms than those who travelled accompanied, as hypothesized. Arguably, this could be due to the small sample size. However, a similar study conducted in Germany also showed no significant differences between psychological scale scores of unaccompanied and accompanied refugee minors [4].

Study results confirmed the third hypothesis and were in line with previous studies showing that a higher number of SLEs is significantly and positively related to higher levels of PTSD and other psychological symptoms [4]. Last, study findings confirm the fourth hypothesis and support the suggestion that low social support is related to an increased risk for PTSD, depression and anxiety symptoms [16,20]. Still, multiple regression analyses showed that perceived support from peers and SLEs predicted PTSD symptoms, and only SLEs predicted other psychological symptoms. These results suggest that peer support might help these children and youth cope with SLE experiences, mitigating the development of PTSD symptoms after a traumatic incident, unlike other psychological symptoms, which might have been present before exposure to SLEs.

The current study has some limitations. The current study is based on cross-sectional data, making it difficult to draw inferences about the temporal relations among the studied variables. Moreover, the study sample had fewer females than males, making it harder to further analyse differences based on

gender. The assessment of psychopathology relied solely on participants' self-reports, and other sources of information might have resulted in more reliable data. Because the study was carried out in various languages, interpretation bias can be a potential limitation. Additionally, since the study was conducted in Iceland with a group of individuals from diverse cultural backgrounds, caution should be taken when generalizing study results to other cultural settings. Last, future research should include other factors that might contribute to or hinder this group's mental health (e.g. acculturation strategy preferences).

However, the study has several strengths. First, this is the first study in Iceland examining the SLEs experienced by asylum-seeking children and youth and the role that risk and protective factors such as SLEs and perceived parental and peer support play in the development of PTSD and other psychological symptoms. Furthermore, as both adolescent and asylum-seeking youth who travelled alone and accompanied to Iceland were included, direct comparisons between these two groups could be applied. Another strength of the study is that standardized measures commonly used among refugee minors in Europe were used, which allowed comparing the results with those reported in previous studies. Last, participants were assessed in an interview-like setting with interpreters, which resulted in very few missing data since difficulties in understanding could be resolved.

In conclusion, adolescent and young asylum-seekers are exposed to a high number of SLEs, which increases their risk of developing mental health problems. Moreover, although those who travelled alone were more exposed to SLEs, results revealed no significant differences between groups in the severity of PTSD and other psychological symptoms. In 2007, the Icelandic government enacted an integration policy on immigrant issues to ensure that all residents of Iceland, regardless of their age and background, enjoyed equal opportunities to participate as active members of Icelandic society [30]. The policy emphasizes that for immigrants' integration to take place, Iceland's society needs to be able to react to changed circumstances in the labour market, school system, health care services and other welfare services. Accordingly, the study results underline the need for health care and welfare services to adapt their services to the needs of vulnerable immigrant groups and provide early assessments and intervention for all children and young asylum-seekers, regardless of whether they travel (un)accompanied. Last, as higher levels of social support, particularly from peers, were related to less severe PTSD symptoms, government policy should focus on creating opportunities that foster social support for these children and youth to help them successfully cope with SLEs.

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Declaration of conflicting interests

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Paper III

The Integration Hypothesis and Positive Mental Health Outcomes for Children and Young Asylum-seekers in Iceland

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Abstract

The current global situation affects millions of people forced to flee their homes in search of safety and protection. Child and youth forced migrants are often exposed to stressful life events before arrival in the country of resettlement and suffer more mental health problems than other migrants. For this population, finding the balance between maintaining their heritage culture while interacting with the larger new society is related to better mental health, a phenomenon referred to as the integration hypothesis. The present study sought to address gaps in the literature by examining the integration hypothesis among children and youth who sought asylum in Iceland. The study examined the acculturation strategy preferences of participants and their relationship to mental health outcomes. Participants were 75 individuals, ages 13 to 24, who arrived in Iceland between 2016 and 2020. Part of the data was collected via face-to-face interviews, while mental health measures were administered. Participants who preferred integration showed the best mental health outcomes, while those who chose marginalization had poorer mental health. Study results support the integration hypothesis in Iceland and underline the importance of helping children and youth migrants recognize the value of maintaining their heritage culture while interacting with the larger society.

Keywords: Acculturation, integration hypothesis, children, youth, asylum-seekers, mental health.

The Integration Hypothesis and Positive Mental Health Outcomes for Children and Young Asylum-seekers in Iceland

Ongoing international armed conflicts and the resulting lack of safety and opportunities have forced millions of people to flee their homes. In 2021, 40.9% of the 89.3 million forcibly displaced migrants worldwide were children (United Nations High Commissioner for Refugees [UNHCR] , 2022). Children and youth forced migrants often experience stressful life events (SLEs) and risk developing mental health problems (Jakobsen et al., 2014; Müller et al., 2019). Still, a growing body of research suggests they can develop resilience and adapt successfully to new environments (Montgomery, 2010; Scharpf et al., 2021). Adaptation is considered a consequence of acculturation and refers to individuals' psychological well-being and how they manage socio-culturally (Sam & Berry, 2010).

Child and youth migration is a complex and dynamic process occurring in response to global economic and social change (Veale & Doná, 2014). Forced migrant children and youth are exposed to traumatic events and migration-related stressors throughout pre, peri, and post-migration (Fazel et al., 2012; Kien et al., 2019). Those who claim asylum after migration face additional hurdles related to the asylum process not met by other immigrant groups (e.g., age assessment procedures, placement in low-support housing, and asylum refusal) (Jakobsen et al., 2017). For example, children and teens seeking refuge in Iceland reported feeling disregarded during the asylum process since they were rarely allowed to speak their opinions on issues important to them (such as the application process and their feelings) (Gudmundsdóttir et al., 2018). They also found the reception's accommodations to be constrictive in everyday life, had restricted access to extracurricular activities, and voiced a lack of care and support (particularly those who traveled unaccompanied to Iceland) (UNICEF, 2019). Moreover, asylum interviews within the asylum process can be stressful

and potentially trigger post-traumatic intrusions in already traumatized individuals (Schock et al., 2015). Refugee youth experience more maladaptation (e.g., worse psychological and socio-cultural adaptation) than immigrant youth from non-refugee backgrounds (Buchanan et al., 2018). Refugee youth's experiences of trauma and forced migration add stress to the already challenging process of adapting to and learning a new culture (Buchanan et al., 2018). However, these children and youth possess resilience (i.e., psychological strength) and cultural competence (i.e., the ability to function successfully in cultural settings other than their own), which play an essential role in their adaptation following resettlement (Safdar et al., 2021). Several factors have been related to resilience among refugee children; for instance, peer and community support, school (e.g., peer acceptance and academic achievement), family connectedness, and the integrative acculturation strategy (Scharpf et al., 2021). In this respect, the acculturation strategy preferences of forced migrant children and youth can impact how they cope with stress and their subsequent adaptation.

Part of the adaptation process of immigrants entails the phenomenon of acculturation, where psychological and cultural changes occur following contact between different cultural groups and their separate members. Berry (1997) argued that differences exist in how individuals and groups simultaneously deal with maintaining their heritage culture and participating in the new larger society. Consequently, this gives rise to four acculturation strategies: assimilation (i.e., lack of interest or opportunity to maintain the heritage culture while seeking interaction with the larger society), integration (i.e., maintaining the heritage culture while seeking to participate as an integral part of the larger society), separation (i.e., maintaining the heritage culture while lacking interest or opportunity to interact with the larger society), and marginalization (i.e., neither maintain the heritage culture nor seeking interaction with the larger society, via choice or lack of opportunity) (Berry, 1997). The length of residency in the resettlement country has been linked to how young immigrants

acculturate and adapt, with integration being more common among young immigrants with longer residency in the country of resettlement (Berry et al., 2006). Furthermore, Berry et al. (2006) suggest that young immigrants will have more positive psychological and socio-cultural adaptation as their length of stay increases.

Integration is considered the most beneficial acculturation strategy for well-being, followed by assimilation and separation with comparable levels of well-being, and marginalization showing the lowest levels (Berry & Hou, 2017). Integration is the preferred strategy by migrant youth across countries and is positively related to their psychological and socio-cultural adjustment (Abu-Rayya & Sam, 2017; Berry et al., 2006; Nguyen & Benet-Martínez, 2013). A phenomenon referred to as the integration hypothesis.

The integration hypothesis has been tested using a variety of methods, most notably the one-statement, two-statement, and four-statement approaches (Sam & Ward, 2021). The one-statement approach uses a bipolar scale ranging from preserving the heritage culture to adopting the mainstream culture. The two-statement approach (i.e., two-dimensional model) uses two scales (i.e., heritage and mainstream culture orientations). It requires classifying individuals as high or low on these scales using the scales' midpoints or medians as cut-points to generate four acculturation strategies. Lastly, the four-statement approach measures orientations towards the four acculturation strategies through separate parallel items. Although critics have argued that the two-statement approach makes comparisons across studies difficult since cut-points tend to differ across samples (Schwartz et al., 2010), Berry's two-dimensional model has repeatedly demonstrated to be a valid and useful instrument for assessing acculturation (Sam & Ward, 2021).

Independently of the methods used, there is an understanding that the context needs to be considered when studying acculturation (Sam & Ward, 2021). Critics maintain that acculturation's role in adaptation is limited as it overlooks contextual factors such as

discrimination, language barriers, and social support to understand minority-group members' adaptation (Bierwiaczonek & Kunst, 2021). Others suggest that acculturation is a multidimensional process involving factors such as heritage and mainstream cultural practices, values, and identifications (Schwartz et al., 2010). For instance, the Multidimensional Individual Difference Acculturation (MIDA) model was developed as a theoretical model of immigrants' adaptation (Safdar et al., 2003). The MIDA model considers the role of several factors, such as psychosocial resources (e.g., resilience or psychological strength, cultural competence, and support from the host society), co-national connectedness (e.g., ethnic identity, quality of family ties, support from ingroup members), hassles, and acculturation orientations in predicting immigrants' adaptation (Safdar et al., 2021). Notwithstanding, Berry's model of acculturation is still a valuable framework for understanding immigrants' adaptation, and the integration hypothesis remains widely accepted (Sam & Ward, 2021). Recent studies suggest that integration helps migrant youth develop resilience and improve mental health (EL-Awad et al., 2021; Wu et al., 2018). However, research is limited regarding the acculturation strategy preferences of children and youth who arrived in the resettlement country as asylum-seekers and their relationship to mental health outcomes (Sheikh & Anderson, 2018). Furthermore, most acculturation research has been conducted in countries such as the USA, Canada, Australia, and certain European countries (e.g., Belgium, Netherlands, and Germany) (Berry et al., 2006; Nguyen & Benet-Martínez, 2013; Sheikh & Anderson, 2018). Still, research is very limited in this area of study in Iceland.

The number of asylum-seekers in Iceland has increased considerably in recent years. In 2022, 421% more individuals sought asylum in Iceland than in 2019 (4,516 compared to 867), and approximately one-fourth of the applicants were children (25%), mainly traveling accompanied (Directorate of Immigration, n.d.). There are unique challenges immigrants face

moving to a remote country like Iceland, which could affect their adaptation. Icelandic weather can be harsh (e.g., storms with high winds and rain or snow are common), and there are only a few hours of daylight during the wintertime. Furthermore, due to Iceland's small population, few people worldwide speak Icelandic, and its grammatical complexity makes the language difficult and less desirable to learn (Thordardottir & Juliusdottir, 2013). Although qualitative research on immigrant children's adaptation in Iceland has been conducted (Ottósdóttir & Wolimbwa, 2011), additional research is required to better understand the psychological lives of forced migrant children and youth in Iceland, as well as the relationship between integration and mental well-being for this population.

Against this background, the overall aim of the present study was to examine how acculturation strategies preferences, and duration of stay in Iceland, were related to mental health outcomes for children and youth asylum-seekers in Iceland and whether there was support for the integration hypothesis in Iceland. Based on the literature, the following hypotheses were put forward:

H1: Integration will be the most preferred strategy.

H2: Participants who prefer integration will report better mental health outcomes (i.e., post-traumatic stress disorder [PTSD], depression, anxiety, and externalizing symptoms) than those favoring other acculturation strategies.

H3: Marginalization will be the least preferred strategy.

H4: Participants who prefer marginalization will report worse mental health outcomes than those favoring other acculturation strategies.

H5: The association between acculturation strategy and mental health outcomes will be stronger for participants living in Iceland for a longer period of time than for those living in Iceland for a shorter period.

Methods

Participants

Participants were 75 children and youth, 25 females and 50 males, ages 13 to 24 (M = 19.71, SD = 3.03). They originated from 25 countries: 37 from the Middle East and North Africa, 17 from Sub-Saharan Africa, 14 from Latin America, five from Eastern Europe, one from South Asia, and one was undocumented. Thirty-eight traveled to Iceland accompanied by a parent or legal guardian (50.7%), while 37 traveled alone (49.3%). Participants had sought asylum in Iceland between 2016 and 2020 and had been living in the country between six and 56 months when the study took place (M = 23.54 months, SD = 14.47 months). As seen in Table 1, participants differed in their asylum application status.

Table 1

Asylum Application Status at the Time of Assessment

Type	*n* (%)
Refugee status granted[a]	22 (29.3%)
Subsidiary protection[b]	19 (25.3%)
Humanitarian grounds[c]	4 (5.3%)
Appealed negative decision on asylum claim[d]	2 (2.7%)
Special ties[e]	1 (1.3%)
Asylum application in process	27 (36.1%)

Note. In the Icelandic asylum procedure, there are four possible outcomes: [a]Refugee status (i.e., recognition of refugee status and temporary residency, with an initial duration of four years). [b]Subsidiary protection (i.e., international protection for persons seeking asylum who do not qualify as refugees, with an initial duration of four years). [c]Humanitarian grounds permit (residency permit on humanitarian grounds, with an initial duration of one year). [d]The

application is denied but can be appealed to the Immigration Appeal Board. [e]In exceptional cases a residency permit based on special ties to Iceland may be granted.

Procedures

Invitation letters were sent to 288 potential participants from a list provided by the Icelandic Directorate of Immigration (DI), and only 20 refused participation. Next, phone calls were made in random order to set up appointments. Participants, and legal guardians of underage participants (i.e., below 18 years), signed informed consent forms and were told they could refrain from answering questions and terminate participation at any time. No incentives were given for participation. Participants could elect where the assessment took place; most chose a private mental health clinic, while the rest selected their homes or public locations.

Socio-demographic information and questions from the acculturation measure (i.e., VAI) were collected via face-to-face interviews with interpreters when required, while mental health self-report measures were administered to participants (i.e., RATS and HSCL-37) following face-to-face interviews.

The study received ethical approval from the Icelandic National Bioethics Committee and the Data Protection Authority in May 2020 (VSN-20-005).

Measures

Socio-demographic Information.

Participants were asked about their age, gender, country of origin, and whom they traveled with to Iceland. The DI provided data on the exact date of the asylum application and refugee status.

Duration of stay in Iceland. The asylum application date was subtracted from the assessment date. Median split was used to create a categorical variable that classified

participants as either having lived in Iceland for 18 months or less (N = 39) or having lived in Iceland for over 18 months (N = 36).

Mental health

The Hopkins Symptom Checklist-37 for Adolescents (HSCL-37A). A self-report for evaluating anxiety, depression, and externalizing behavior symptoms (Bean et al., 2007), adapted from the Hopkins Symptom Checklist-25 (HSCL-25) (Derogatis et al., 1974). The HSCL-37A is rated on a 4-point Likert scale, with higher scores indicating more symptoms (scores from 37 to 148). It consists of an internalizing and an externalizing symptoms cluster. The internalizing cluster is composed of 25 items, which can be grouped into a depression subscale (15 items, scores from 15 to 60) and an anxiety subscale (10 items, scores from 10 to 40). The externalizing symptoms cluster consists of 12 items related to problem behavior. Examples of HSCL-37A items are: "Crying easily; starting fights; heart pounding or rising; difficulty falling asleep, staying asleep; poor appetite; trembling." The Cronbach's alpha values in this study were: HSCL-37A α=.95, internalizing cluster α=.96, depression subscale α=.92, anxiety subscale α=.91, and externalizing cluster α=.61. In the current study, the depression and anxiety subscales of the internalizing cluster were evaluated separately.

The Reactions of Adolescents to Traumatic Stress Questionnaire (RATS). A self-report measure for evaluating post-traumatic stress symptoms (Bean et al., 2006). It consists of 22 items parallel to the DSM-IV criteria for PTSD, scored on a four-point Likert scale, with higher scores indicating more symptoms (scores from 22 to 88). Examples of RATS items are: "I have bad dreams and nightmares about the event(s); I feel afraid or sad (upset) when I think about the event(s); I feel all alone." The Cronbach's alpha value obtained in this study was α = .86.

The HSCL-37A and RATS are reliable and valid instruments for assessing the mental health symptoms of culturally diverse adolescents (Bean et al., 2007). Centrum '45 in the

Netherlands validated the use of multiple translations of the HSCL-37A and RATS with a culturally diverse population and approved the use of all translations in the current study (Gerda Heslinga, personal communication, April 8, 2019).

Acculturation

The Vancouver Index of Acculturation (VIA). A self-report measure consisting of two subscales measuring orientation towards heritage (10 items) and mainstream (10 items) cultural tendencies. Item examples are: "I am interested in having friends from my heritage culture; I am interested in having Icelandic friends." Items are rated on a 9-point Likert scale (Ryder et al., 2000). The VIA has shown good reliability and validity and is a frequently used acculturation instrument (Testa et al., 2019). In the current study, Cronbach's alpha values were $\alpha = .81$ for the heritage subscale (HS) and $\alpha = .74$ for the mainstream subscale (MS).

Acculturation Strategies. The mean scores of the two VAI subscales were used to create four acculturation strategies subscales. Both subscales' mean and median scores were almost identical (see Table 2). The empirical mean was elected, instead of the theoretical mid-point, as it offers a better distribution of the responses and reduces the risk of wrongly classifying individuals into the different acculturation strategies. The assimilation subscale distinguished participants who were below the mean on the HS and equal to and above the mean on the MS. The integration subscale distinguished those equal to and above the mean on both subscales. The separation subscale distinguished those equal to and above the mean on the HS and below the mean on the MS, and the marginalization subscale distinguished those below the mean on both subscales.

Table 2

Means, Medians, and Standard Deviations of the Heritage and Mainstream Subscales

Subscale	Mean	Median	SD
Heritage culture	6.05	6.40	1.72
Mainstream culture	6.33	6.40	1.36

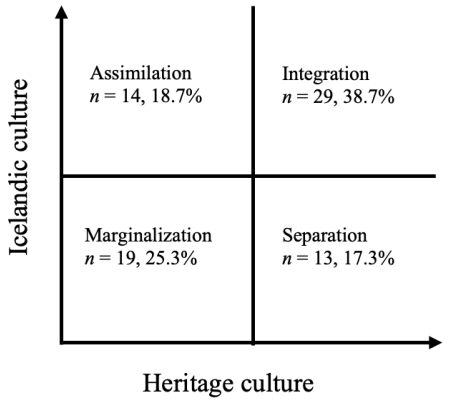
Data were analyzed using IBM SPSS statistics, version 27. Assumptions for all data analysis were examined and met.

Results

A chi-square test showed a significant difference in the frequency of preferred acculturation strategies ($X^2(1, N = 75) = 5.36$, $p = .021$), with most participants preferring the integration strategy (38.7%), followed by marginalization (25.3%), assimilation (18.7%), and separation (17.3%) (seen in Figure 1).

Figure 1

Preferred Acculturation Strategies



A one-way ANOVAs showed that the effect of acculturation strategy on mental health outcomes was significant for the PTSD symptoms scale (F (3,71) = 3.67, $p = .016$) and the depression symptoms subscale (F (3,71) = 3.03, $p = .035$), but not for the HSCL-37A scale (F

(3,71) = 2.52, p = .064), the anxiety symptoms subscale (F (3,71) = 1.70, p = .175), nor for the externalizing symptoms cluster (F (3,71) = 1.15, p = .34). Tukey's post hoc tests showed that the integration strategy group had significantly lower mean levels of PTSD symptoms than the marginalization group (p = .042), and the assimilation group had significantly lower mean levels of PTSD symptoms than the marginalization group (p = .018). Lastly, the integration strategy group had significantly lower mean levels of depression symptoms than the marginalization group (p = .027). Table 3 presents descriptive statistics of scores on the mental health measures for each acculturation strategy group.

Table 3

Means and Standard Deviations of Scores on Mental Health Measures for the Acculturation Strategy Groups

Scale	Assimilation	Integration	Separation	Marginalization	Total
	n = 14	n = 29	*n = 13*	*n = 19*	*N =75*
	M (SD)	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*
RATS	43.50 (12.18)	46.31 (9.89)	49.03 (13.05)	54.80 (8.55)	48.41 (11.20)
HSCL-37A	62.39 (21.45)	60.51 (15.77)	67.12 (18.76)	74.92 (19.65)	65.66 (18.20)
DS	28.28 (11.64)	27.80 (8.74)	30.47 (9.12)	36.21 (10.87)	30.48 (10.35)
AS	19.24 (7.94)	17.21 (6.54)	19.92 (7.83)	21.85 (6.73)	19.23 (7.19)
EC	14.29 (2.49)	15.10 (2.71)	16.08 (3.07)	16.05 (4.08)	15.38 (3.15)

Note. RATS = the Reactions of Adolescents to Traumatic Stress Questionnaire; HSCL-37A = the Hopkins Symptom Checklist-37 for Adolescents; DS = HSCL-37A depression subscale; AS = HSCL-37A anxiety subscale; EC = HSCL-37A externalizing cluster.

A two-way ANOVA showed that there was a significant main effect of acculturation strategy on PTSD symptoms (p = .02) but not a main effect of duration of stay on PTSD

symptoms (p = .39). Furthermore, there was not a statistically significant interaction between acculturation strategy and duration of stay on PTSD symptoms (F (3, 67) = .32, p = .81). Similarly, there was a significant main effect of acculturation strategy on depression symptoms (p = .03), but not for duration of stay (p = .82), nor for the interaction between the two independent variables on depression symptoms (F (3, 67) = .41, p = .75). Tukey's post hoc test from the two-way ANOVAs revealed that the integration strategy group had significantly lower mean levels of PTSD symptoms than the marginalization group (p = .032), the assimilation group had significantly lower mean levels of PTSD symptoms than the marginalization group (p = .013), and the integration strategy group had significantly lower mean levels of depression symptoms than the marginalization group (p = .030). Table 4 presents descriptive statistics of scores on the mental health measures for each acculturation strategy group by the length of stay in Iceland (i.e., 18 months or less and more than 18 months).

Table 4

Means and Standard Deviations of Scores on Mental Health Measures for the Acculturation Strategy Groups by Length of Stay in Iceland

Scale	Assimilation	Integration	Separation	Marginalization	Total
	n = 14	*n = 29*	*n = 13*	*n = 19*	*N =75*
	M (SD)	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*
RATS					
<18m	43.38 (13.47)	45.18 (9.51)	46.79 (12.93)	55.05 (8.08)	46.95 (11.32)
>18m	43.67 (11.48)	47.52 (10.51)	54.07 (13.64)	54.65 (9.17)	49.98 (11.00)
HSCL-37A					
<18m	59.74 (17.69)	58.14 (14.20)	66.01 (20.40)	78.10 (17.76)	63.87 (18.01)
>18m	65.92 (27.06)	63.04 (17.46)	69.63 (16.92)	73.06 (21.21)	67.59 (20.08)
DS					
<18m	27.46 (10.41)	26.72 (7.73)	29.79 (10.00)	38.72 (9.51)	29.74 (9.84)
>18m	29.37 (14.08)	28.95(9.87)	32.00 (7.83)	34.74 (11.73)	31.29 (10.95)
AS					
<18m	17.92 (5.88)	16.40 (6.19)	19.78 (8.33)	23.60 (7.34)	18.78 (7.11)
>18m	21.00 (10.45)	18.07 (7.02)	20.25 (7.72)	20.83 (6.45)	19.72 (7.34)
EC					
<18m	13.75 (2.31)	14.60 (2.85)	15.67 (3.32)	14.71 (2.06)	14.69 (2.72)
>18m	15.00 (2.76)	15.63 (2.56)	17.00 (2.58)	16.83 (4.80)	16.08 (3.45)

Note. <18m = living in Iceland for 18 months or less; >18m = living in Iceland for more than 18 months; RATS = the Reactions of Adolescents to Traumatic Stress Questionnaire; HSCL-

37A = the Hopkins Symptom Checklist-37 for Adolescents; DS = HSCL-37A depression subscale; AS = HSCL-37A anxiety subscale; EC = HSCL-37A externalizing cluster.

DS = depression subscale; AS = anxiety subscale; EC = externalizing cluster.

Discussion

As stated in the first hypothesis, integration was the preferred acculturation strategy by study participants, analogous to other studies (Berry et al., 2006; Berry & Hou, 2017). Conversely, the third hypothesis was not supported, as separation was the least preferred strategy, and marginalization came in second place. Similarly, a study in Australia suggested that integration and marginalization might be the two primary options for refugee youth (Buchanan et al., 2017). Participants' preference for marginalization might be related to the Icelandic context and may be a way of coping with challenging circumstances. During the winter, when weather conditions are harsh, it can be more difficult for some individuals to leave their homes, leading them to isolate. Moreover, some young asylum-seekers are placed in reception accommodations that are secluded and restrictive in everyday life (UNICEF, 2019).

The results confirmed the second and fourth hypotheses, showing that participants who preferred the integration strategy reported better mental health outcomes than those favoring other acculturation strategies. Inversely, those who opted for marginalization reported worse mental health outcomes. Results are in line with previous studies demonstrating that young migrants who prefer integration show the best psychological outcomes and the least internalizing symptoms, while those who prefer marginalization show poorer mental health (Berry et al., 2006; Berry & Hou, 2017; EL-Awad et al., 2021; Schmitz & Schmitz, 2022). Marginalization is, in many cases, not a free choice, and circumstances such as discrimination might force this strategy upon individuals (Berry, 1997). Marginalization involves rejection by the larger society, coupled with own-culture loss,

which can generate hostility and reduced social support (Berry, 1997). Accordingly, this might explain why these individuals reported higher scores on self-report measures of PTSD and depression. Poor mental health might also be linked to the circumstances surrounding the asylum process, as post-migration stressors (e.g., asylum status) can affect the mental health of children and youth asylum-seekers (Blackmore et al., 2019; Bronstein & Montgomery, 2011). Lastly, the fifth hypothesis was not confirmed as the association between acculturation strategy and mental health outcomes was not stronger for participants who had lived longer in Iceland. Conversely, studies have suggested that duration of residency is related to immigrants' acculturation and adaptation (Berry et al., 2006; Berry & Hou, 2016).

Study results suggest that while the vulnerability of children and youth forced migrants is commonly recognized, integration contributes to their well-being. As migrant youth seek to integrate, they attempt to find a balance between their heritage and new cultural identities, contributing to better psychological and socio-cultural adaptation (Berry et al., 2006). Berry (1997) characterized people who preferred integration as having social support from two cultural communities (i.e., heritage and mainstream), which offers them double protection against acculturative stresses.

In this study, both the integration and assimilation strategies were related to fewer PTSD symptoms than the marginalization strategy suggesting that participants' involvement with the larger society might help them deal with traumatic events. Interaction with members of the larger community could result in increased peer social support, which acts as a protective factor in helping them cope with stressful life events, effectively thwarting the development of PTSD symptoms (Cardenas et al., 2022).

The current study has several strengths. It helps fill the gap in the literature regarding the preferred acculturation strategies by children and young asylum-seekers and their effect on mental health outcomes. Moreover, this study advances our knowledge of this area of

study in Iceland, acknowledging the extraordinary circumstances children and youth face when moving to a remote country like Iceland, with its challenging environment and complex grammatical language.

Despite these strengths, the study is based on cross-sectional data, making it difficult to draw inferences about the temporal relations among the studied variables. As acculturation is a dynamic process (Berry, 1997), longitudinal studies may be more suitable for documenting acculturative changes over time. Furthermore, other theoretical models might be useful for understanding the role of numerous factors in the adaptation of young refugee migrants. Moreover, external factors such as the Covid-19 pandemic might have caused isolation for some participants. However, few Covid-19 restrictions were in place when assessment took place. Lastly, the evaluation of psychopathology relied solely on participants' self-reports, and additional sources of information might have resulted in more reliable data.

The study results, derived from a measure based on John Berry's acculturation theory (1997), are noteworthy and show that the integration hypothesis is relevant in Iceland. Considering that integration contributes to better mental health outcomes for children and young asylum-seekers, as opposed to marginalization, mental health intervention programs should consider the significance of this construct. It is essential to help vulnerable migrant children and youth recognize the value of maintaining their heritage culture while enhancing their appreciation of the larger society, thus amplifying the advantage of integration to support mental health. These results underline the importance of a multiculturalism policy that promotes heritage culture retention and simultaneously encourages the adoption of the resettlement country's values and cultural practices.

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