Fachbereich Erziehungswissenschaft und Psychologie

der Freien Universität Berlin

# Arabic-speaking refugee youth in Germany at the nexus of adversity and adaptation

Dissertation

zur Erlangung des akademischen Grades

Doktorin der Philosophie (Dr. phil.)

vorgelegt von

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Berlin, Mai 2023

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Datum der Disputation: 17.07.2023

The present doctoral dissertation is based on the following articles:

1. Alhaddad, L., Goodwin, R., & Kanngiesser, P. (2021). Challenges and Coping: Perspectives of Syrian and Iraqi Refugee Youth in Germany: *Journal of Adolescent Research*. https://doi.org/10.1177/07435584211056069 This article is distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 License (https://creativecommons.org/licenses/by-nc/4.0/)

2. Alhaddad, L., Stammel, N., Knaevelsrud, C. & Kanngiesser, P. (2023). Resilience, Mental Health, and Potentially Traumatic Exposure of Arabic Speaking Refugee Youth in Germany. Manuscript submitted for publication.

3. Alhaddad, L., Stammel, N., Meyer, C., Knaevelsrud, C. van der Bos, W., & Kanngiesser, P. (2023). Risk-taking, Patience, and Social Preferences of Arabic Speaking Refugee Youth in Germany: The Role of Traumatic Exposure and Mental Health. Manuscript submitted for publication, under review.

Articles contributed to during the doctoral research period

- **Alhaddad, L.**, Schachner, M., Juang, L., & Pertl, N. (2021). Wie kann die Integration geflüchteter Kinder und Jugendlicher in der Schule gefördert werden? *Fachnetzwerk Sozialpsychologie zu Flucht und Integration.*

**Personal contribution to the study:** I contributed substantially to the conceptualization of the paper, literature review, and first draft of the manuscript. In addition, I provided critical revisions to the manuscript.

- Meyer, C., **Alhaddad, L.**, Stammel, N., Sixtus, F., Wesche, J. S., Kerschreiter, R., Kanngiesser, P., & Knaevelsrud, C. (2023). With a little help from my friends? Acculturation and mental health in Arabic-speaking refugee youth living with their families. *Frontiers in Psychiatry*, *14*, 1130199. https://doi.org/10.3389/fpsyt.2023.1130199

**Personal contribution to the study:** I contributed substantially to the conceptualization of the study, ethics committee application, and coordination of the data collection. In addition, I provided critical revisions to the manuscript.

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# Summary

Arabic-speaking refugee youth constitute one of the largest refugee youth groups in Europe in general and in Germany in particular. In the summer of 2015, Germany witnessed the highest number of asylum applications on record during what was named the "Long Summer of Migration". Refugees from Arabic-speaking countries represented the largest group of arrivals, almost half of them were under the age of 18. Research that adopted a strength-based perspective with this population was limited. Consequently, the overarching goal of this dissertation was to bridge this gap and explore different aspects of refugee youth experiences. To contextualize refugee youth experiences and plan this research project, I integrated different lines of research including social, developmental, cultural, and clinical psychology in addition to behavioural psychology and behavioural economics.

Specifically, I aimed to explore Arabic-speaking refugee youth's coping, resilience, and preferences, and investigate their associations with adverse experiences and mental health symptoms. The first research aim (chapter 2) was to examine post-migration challenges and coping of refugee youth. To achieve this aim, I utilized a qualitative design and conducted semi-structured interviews. This qualitative dataset was collected with 14- to 18-year-old Arabic-speaking refugee participants in Berlin and Potsdam ($N= 20$, 7 female) and analysed using thematic analysis. The main reported challenges were related to psychological wellbeing, school, friendship, accommodation, and discrimination. Participants coped with these challenges by relying on social support (friends, family, social services) and their inner resources (through avoidance, persistence, activity seeking, active engagement). The second research aim (chapter 3) was to utilise an ecological perspective of refugee youth resilience to investigate relations with socio-demographic variables, in addition to testing the association between resilience, mental health symptoms, and potentially traumatic exposure. To achieve this aim, I drew on a cross-sectional dataset collected in schools in Berlin with 14- to 19-year-old Arabic-speaking refugee ($N=103$, 54 female). The number of close friends emerged as the

only socio-demographic variable to relate to resilience, furthermore resilience was inversely related to both depression and PTSD symptoms. The final research aim (chapter 4) was to explore the different associations between mental health (depression symptoms and PTSD symptoms), potentially traumatic exposure, and refugee youth preferences (risk, patience, and social preferences). Drawing on the same quantitative dataset, PTSD symptoms, but not traumatic exposure or depression symptoms, were significantly related to increased risk preferences. However, no significant relation was found for patience, altruism, trust, positive reciprocity, or negative reciprocity.

This empirical research project offered detailed insights into the experiences of Arabic-speaking refugee youth, examining both individual and contextual factors. It revealed potentially traumatic events and post-migration stressors commonly faced by this group. Furthermore, the study highlighted the importance of social networks in supporting Arabic-speaking refugee youth coping and resilience.

## Zusammenfassung

Arabischsprachige geflüchtete Jugendliche stellen eine der größten Gruppen von geflüchteten Jugendlichen in Europa und insbesondere in Deutschland dar. Während des sogenannten "langen Sommers der Migration" verzeichnete Deutschland die höchste Anzahl von Asylanträgen. Geflüchtete aus arabischsprachigen Ländern stellten die größte Gruppe von Ankommenden dar, von denen etwa die Hälfte unter 18 Jahre alt war. Es gibt allerding nur wenig Forschung zu dieser Zielgruppe, die eine ressourcenbasierte Perspektive einnimmt. Daher bestand das übergeordnete Ziel dieser Dissertation darin, diese Lücke zu schließen und verschiedene Aspekte der Erfahrungen geflüchteter Jugendlicher zu untersuchen. Um die Erfahrungen geflüchteter Jugendlicher zu kontextualisieren und dieses Forschungsprojekt zu planen, wurden verschiedene Forschungslinien, darunter Sozial-, Entwicklungs-, Kultur- und klinische Psychologie sowie Verhaltenspsychologie und Verhaltensökonomie zusammengeführt.

Ziel der vorliegenden Dissertation war es, Bewältigung, Resilienz und Präferenzen von arabischsprachigen geflüchteten Jugendlichen zu erforschen und deren Zusammenhang mit belastenden Erfahrungen und psychischen Symptomen zu untersuchen. Das erste Forschungsziel (Kapitel 2) bestand darin, die Herausforderungen nach der Migration und die Bewältigungsstrategien geflüchteter Jugendlicher zu untersuchen. Hierfür wurden mithilfe eines qualitativen Ansatzes halbstrukturierte Interviews durchgeführt. Die qualitative Datensammlung erfolgte mit 14- bis 18-jährigen arabischsprachigen geflüchteten Teilnehmenden in Berlin und Potsdam (N=20, 7 weiblich) und wurde mittels thematischer Analyse ausgewertet. Die am Häufigsten berichteten Herausforderungen waren mit dem psychischen Wohlbefinden, der Schule, Freundschaften, Unterkunft und Diskriminierung verbunden. Die Teilnehmenden bewältigten diese Herausforderungen durch soziale

Unterstützung (Freunde, Familie, soziale Dienste) und ihre persönlichen Ressourcen (durch Vermeidung, Ausdauer, Aktivitätssuche und aktive Beteiligung).

Das zweite Forschungsziel (Kapitel 3) bestand darin, eine sozioökologischePerspektive der Resilienz geflüchteter Jugendlicher zu nutzen, um Zusammenhänge mit soziodemografischen Variablen zu untersuchen sowie den Zusammenhang zwischen Resilienz, psychischen Symptomen und potenziell traumatischen Erfahrungen zu untersuchen. Hierfür wurden an Berliner Schulen querschnittliche Daten von 14- bis 19-jährigen arabischsprachigen geflüchteten Jugendlichen erhoben (N=103, 54 weiblich). Die Anzahl enger Freunde erwies sich als einzige soziodemografische Variable, die mit Resilienz in Verbindung stand. Darüber hinaus war Resilienz invers mit sowohl Depressionssymptomen als auch PTBS-Symptomen assoziiert.

Das letzte Forschungsziel (Kapitel 4) bestand darin, die verschiedenen Zusammenhänge zwischen psychischer Gesundheit (Depressionssymptome und PTBS-Symptome), potenziell traumatischer Exposition und den Präferenzen geflüchteter Jugendlicher (Risiko, Geduld und soziale Präferenzen) zu untersuchen. Unter Verwendung desselben quantitativen Datensatzes zeigte sich, dass PTBS-Symptome, aber nicht traumatische Exposition oder Depressionssymptome, signifikant mit erhöhten Risikopräferenzen verbunden waren. Es wurde jedoch kein signifikanter Zusammenhang mit Geduld, Altruismus, Vertrauen, positiver Reziprozität oder negativer Reziprozität festgestellt.

Die vorliegende Dissertation erlaubt detaillierte Einblicke in die Erfahrungen arabischsprachiger geflüchteter Jugendlicher und untersucht sowohl individuelle als auch kontextuelle Faktoren. Die Ergebnisse verdeutlichen potenziell traumatische Ereignisse und postmigratorische Belastungen, denen diese Gruppe häufig ausgesetzt ist. Darüber hinaus betont die Studie die Bedeutung sozialer Netzwerke für die Bewältigung und Resilienz arabischsprachiger geflüchteter Jugendlicher.

**Chapter 1.   Introduction**

**1.1 The historical, legal, and political context of becoming a refugee**

*"Humanity is a historically emergent (not eternal), place-specific (not*

*universal), colonially entangled concept"*

*(Mayblin & Turner, 2020, p. 148)*

Forced migration is a phenomenon as old as the human story. The first record of human migration was at least 60,000 years ago, when climate change forced modern humans, Homo Sapiens, to move from Africa to Asia, and Europe via the Levant, Eastern Mediterranean region, (Bae et al., 2017). Since then, human migration never stopped, whether to escape challenging climate, instable geopolitical conditions, or violence. Yet, migration studies often neglect a socio-historical perspective that recognizes migration as a tradition that has been present since the beginning of human civilization. Instead scholars tend to term modern migration movements as new and unprecedented, as such the field of refugee studies has commonly been referred to as "ahistorical" (Mayblin & Turner, 2020, p. 140).

Religious prosecution in the 17th century led to the first use of the term "refugee" in a Western language; specifically coined in French in 1685 as "*réfugié*" to refer to French protestants escaping the revocation of the law clause[1] on civil rights and religious freedom (Merriam-Webster, n.d.). The first framework for the protection of refugees, however, would only come into effect nearly three centuries later following the atrocities of the Second World War and the urgency of protecting European refugees relocating within Europe and beyond (*Convention Relating to the Status of Refugees*, 1951). At that time, one of the biggest movements of forced migration on record was taking place in South Asia. The partition of India in 1947, during the British Empire's colonization over India, created two independent

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[1] the Edict of Nantes.

dominions: India and Pakistan, and consequently displaced around 20 million people within the Indian peninsula (Zamindar, 2013). Additionally, and on both ends of the Asian continent, millions were displaced, fleeing China (1949-1950), the Korean war (mid 1940s - early 1950s), and the Palestinian dispossession and exodus, *Nakba* (1920s through 1948 and beyond) (Chatty, 2010; Mark, 2007; Mayblin & Turner, 2020; Yuh, 2005). In the context of these catastrophic events, the 1951 Refugee Convention exclusively sought support for European refugees, while turning a blind eye to the dire refugee situation in other parts of the world. The convention defines a refugee as "someone who is unable or unwilling to return to their country of origin owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group, or political opinion" (*Convention Relating to the Status of Refugees*, 1951). Following two decades of advocacy, these geographic limitations were removed, and asylum right was expanded to include (potentially) everyone (UNHCR, n.d.).

It is crucial here to highlight that people who seek asylum or hold asylum status do not necessarily start their lives as such. They were born into diverse cultural milieus, and led full lives until they experienced "fundamental social disfranchisement" compounded by the inadequate response of the international community (Hathaway, 2007, p. 349). In many cases this is in the form of wars that raked havoc on their lives jeopardizing their sense of belonging, legal status, ability to provide for themselves and their families. Consequently, people are left with three options "kill, die, or leave" (Gowayed, 2022, p. 24). On the journey escaping the horrors of their homeland they become *asylum seekers*. This is powerfully illustrated in Warsan Shire's poem "Home":

*No one leaves home unless*

*home is the mouth of a shark*

*you only run for the border*

*when you see the whole city running as well*

*your neighbors running faster than you*

*breath bloody in their throats*

*the boy you went to school with*

*who kissed you dizzy behind the old tin factory*

*is holding a gun bigger than his body*

*you only leave home*

*when home won't let you stay.*

Currently, the largest number of refugees around the world originate from the Global South. They most likely cross one border and remain in neighboring countries that are commonly economically affected with conflicts, potentially unstable, and with no infrastructure or legal pathways to asylum (UNHCR, 2022). The percentage of people seeking asylum in the high-income countries constitutes 17% of the overall asylum seeker population (Amnesty International, n.d.). Although the right to asylum is protected by European Union legislations, refugees from the Global South[2] attempting to exercise this right are met with restrictions and unconstitutional border closings (Gowayed, 2022).

Since the American invasion of Iraq in 2003 and its long-term consequences, political instability was prevalent in Iraq. Other countries in the Arabic-speaking region of Western Asia

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[2] Refugees from Ukraine represent an exception. In Germany, they benefit from immediate legal residence for 90 days upon entry after which they could apply "unbureaucratically" for temporary protection status (Pro Asyl, 2022).

and Northern Africa witnessed waves of uprisings and eruptions of violence in connection to the "Arab Spring" and related foreign involvement. Syrians fleeing political instability and ensuing violence since 2011 constitute the biggest population of refugees around the world (UNHCR, 2022). Reports estimate that since the start of the conflict 14 million Syrians have been displaced, resulting in the largest refugee displacement since the Second World War (UNHCR, 2023). Given the lack of legal pathways to asylum in the European Union, most asylum seekers, from Syria and neighboring countries, take dangerous routes crossing the Mediterranean and/ or Balkan corridor[3] to Western Europe. Since 2014, close to 30,000 deaths have been recorded on this path, with Syria being the top country of origin of victims (IOM, 2022).

It is important to acknowledge that asylum seekers who survive the arduous journey to resettle in the Global North live in countries whose foreign policy have been complicit in their upheaval through colonization, political meddling, and upholding of white supremacy. These practices create systemic oppression and inequalities within these countries' borders and abroad (Gowayed, 2022). The value of lives lost in wars, violent conflicts, and arduous journeys to seek asylum is appraised differently based on their background as described by Paul Gilroy (2003):

*Old, modern notions of racial difference appear once again to be active*

*within the calculus that tacitly assigns differential value to lives lost*

*according to their locations and supposed racial origins, or considers that*

*some human bodies are more easily and appropriately humiliated,*

*imprisoned, shackled, starved and destroyed than others.  (P.263) as cited*

*in Mayblin & Turner (2020)*

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[3] This route is one of the most frequented path by asylum seekers heading towards Western Europe, for more check (Arsenijević et al., 2017).

In this section, I have thus far broadly introduced the historical-political context of refugee protection and touched on current refugee displacements particularly in the Arabic-speaking region. Regrading destination countries, Germany has been the only high-income country in the past years named among the top five receiving countries of refugees around the world (UNHCR, 2022). In the next section I will elaborate on modern migration and asylum trends in Germany.

**1.1.1 The context in Germany**

During the 1951 Refugee Convention, West Germany was one of the twenty-six states in attendance and subsequently ratified the Protocol of 1951 and later the one of 1976. Additionally, the right to asylum was inscribed into the German Basic Law, Germany's Constitution, in Article 16(a), (Ayoub, 2019). Since the fall of the Berlin Wall in 1989 and the reunification of Germany, the country received refugees mainly from Yugoslavia and its successor states, as well as many refugees from Eastern Europe states, Turkey and the Arabic-speaking states of Western Asia and Israel (*Shaping Immigration Society Together*, 2021). At the time, Germany was explicitly described as *not* a country of immigration, and as such immigrants and refugees who had have lived in Germany for decades were denied citizenship based on the *jus sanguinis[4]* principle (Gowayed, 2022). Until the year 2000, when the *jus soli[5]* principle was introduced via the Nationality Act (StAG) (*Shaping Immigration Society Together*, 2021).

It was estimated that between the years 2000 and 2019, more than 2.5 million asylum applications were filed in Germany by people from third countries[6]. Notably, within that decade a strong increase in refugee migration was recorded since 2015, due, among other things, to

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[4] Citizenship determined by blood. Therefore, immigrants could not obtain German citizenship and their children inherited their parents' nationality.
[5] Citizenship determined by place of birth.
[6] Third countries refer to nations outside of the European Union (EU) or European Free Trade Association (EFTA) countries.

the outbreak of war in Syria, the advance of Daesh, ISIS, in Iraq and the ongoing conflicts in Afghanistan (*Shaping Immigration Society Together*, 2021). On August 25, 2015, the German Chancellor Angela Merkel suspended the Dublin procedure[7] for Syrian citizens which made the country a desirable destination for refugees from Syria and other countries (Dockery, 2017). During what was later known as the "Long Summer of Migration", Germany received the largest number of asylum applications on record (Hamann & Karakayali, 2016). In March 2016, due to the EU-Turkey declaration[8] and the closure of the Balkan route, this number dropped sharply (*Shaping Immigration Society Together*, 2021).

Legally, refugee status can be granted in Germany for persons fleeing war and religious, racial, political, gender or sexual orientation based persecution (BAMF, 2018). An application for asylum in Germany has the following possible outcomes: refugee protection[9], subsidiary protection, deportation ban, and rejection (BMI, n.d.).

In 2017, the year data collection for this dissertation started, 222.68 [10] asylum applications were submitted in Germany, of these applications, close to half were made by minors under the age of 18 (BAMF, 2023) and around 90% of minors who applied for asylum were accompanied (BAMF, 2018). Only 19.1% of these applications were approved for refugee protection, with 11.6% approved for subsidiary protection, and 4.4% for deportation ban. Meanwhile, 34.8% of the applications were rejected and 30.2% were denied due to lack of

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[7] The Dublin regulation mandates that the first EU country of entry of an asylum seeker is the country accountable for registering the asylum application. The suspension of Dublin regulations for Syrian citizens resulted in Germany processing their asylum applications, regardless of whether they had transited through another European member state, instead of sending them back to their first point of entry.

[8] The agreement states that Turkey would take measures to prevent „irregular" migration flows from its territory into the EU, and to take back refugees and migrants who entered the EU „irregularly" via Turkey. In exchange, the EU promised to provide financial assistance to Turkey to support refugees and to accelerate the visa liberalization process for Turkish citizens traveling to the EU.

[9] The refugee protection category grants asylum seekers three years residence status with the right to permanent residency after three years and the right to apply to family reunification. The rest offer a 1-year residence permit, to be extended upon yearly evaluations, with a longer path towards permanent residency and no guarantee of family reunification.

[10] During the rest of data collection period the number of asylum application were as follows, 2018 (185.853), 2019 (165.938) (BAMF, 2023).

jurisdiction by the German state (BAMF, 2019). Importantly, the decision regarding an asylum application is influenced by the country of origin of the applicant. For example, at the time of data collection for this research project Syrians were more likely to get Asylum status than their Iraqi peers (Pro Asyl, 2019). The right to family reunification is one of the main reasons asylum seekers choose Germany as a destination (Brücker et al., 2016). According to a federal report, Syrian citizens account for approximately 30% of those granted this right since 2015 (Deutscher Bundestag, 2019), with Syrian children and parents reunification accounting for most of these applications[11] (BAMF, 2019).

The increased number of refugees arriving in Germany in the past decade has sparked heated debates in German politics and civil society. The "welcome culture"[12] spreading across the country transformed the local response to refugees' arrival and the image of Germany locally and abroad. Volunteers and welcome initiatives played a vital role in balancing the overwhelmed and underprepared immigration administrations (Funk, 2016; Hamann & Karakayali, 2016). On the other hand, right wing political movements gained momentum in response to migration-related policies (Funk, 2016). Interestingly, refugees' arrival was received positively by economy advisors as it promised to fill shortages in the labor market and boost the economy. This enthusiasm towards refugees' integration into the job market was reminiscent of the discourse surrounding foreign workers, mainly from Turkey and other Southern European countries, who joined the German workforce in the 1960s. Framed as "guest workers", these immigrants' labor was welcomed enthusiastically, however, not their cultural influence nor their participation in the broader German society (ibid.). This divide between narrow political and economic plans, and the full humanity of the people relocating to

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[11] As compared to applications made for reunification with spouses.
[12] Welcome initiatives that boomed during this time are rooted in a long legacy of solidarity with war refugees dating as far back as WW2 and WW1.

join the workforce was well portrayed in 1965 by the Swiss author Max Frisch: "We called for workers, but we got people."[13]

In her ethnography "Refuge: How the State Shapes Human Potential", sociologist Heba Gowayed argues that the general German discourse surrounding modern immigration and asylum policies[14] is still influenced by the long history of "Germany as a country for Germans" (Gowayed, 2022). Such narratives of exclusion poses a threat to refugees' ability to participate proactively in their new society as well as their sense of belonging to their new countries of residence (and possibly their future country of nationality) (Heikkinen, 2000). Moreover, it influences essential aspects of their lives, namely access to education, particularly (particularly higher education), employment, housing, and politics (Gruttner et al., 2018; Weidinger & Kordel, 2023).

**1.2 Theoretical considerations for refugee youth research**

Young refugees resettling in a new country constitute a unique demographic. Whereas adult refugees making this journey would be referred to as first generation immigrants, children and youth, particularly those resettled after reaching school age, belong to the 1.5 immigrant generation (Portes & Rumbaut, 2001). This term was first coined by Rumbaut (1991) and elaborated by Pérez (1994) to describe the experiences of Cuban and Southeast Asian migrants and refugees. As such, the term 1.5 generation refers to this age group as a distinct cohort, differentiating them from 1st generation immigrants, born abroad and resettled as adults, and 2nd generation immigrants born to one or more immigrant parent (Cebulko, 2014). The focus on the 1.5 generation has since been applied in research with different migrant and refugee groups, such as Turkish migrants in Germany (Krapf & Wolf, 2015), Russian immigrants in Israel (Remennick, 2003), Hmong-Americans and Brazilian immigrants in the US (Cebulko,

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[13] In German „wir riefen Arbeitskräfte und es kamen Menschen"
[14] At the time of writing this thesis, delibrations regarding immigration reform were underway, intended to tackle ongoing labour shortages within the country.

2014; K. Y. Lee & Clarke, 2013), South-Korean immigrants in New Zealand (Roh & Chang, 2020), and with Cuban-educated African refugees[15] (Ryer, 2010). These studies demonstrate the unique experience of this generation growing up between languages and between cultures, as described by Pérez Firmat (1994):

> *One-and-a-halfers are translation artists. Tradition bound but translation*
>
> *bent, they are sufficiently immersed in each culture to give both ends of the*
>
> *hyphen their due. (P. 7)*

The lived experiences of refugee youth are complex and multi layered. They entail several disruptions across different domains of their lives. These interruptions include long term separation from nuclear and/or extended family, separation from friends and support networks, interrupted education, potential exposure to traumatic experiences along the different stages of the refugee journey, in addition to the chance/challenge of making a new home in their destination country (Ajrouch et al., 2020; Lustig, 2010). Refugee youth face these difficult challenges while attempting to address age related developmental tasks (Jugert & Titzmann, 2020). It is therefore important to seek a nuanced and holistic understanding of this group's experiences, as described by Brough and colleagues (2003):

> *For refugee youth, the desire for better futures is more poignant as they*
>
> *seek to establish secure futures not only in a new social, cultural, and*
>
> *geographical space but also in a new adult space as well. (P.1)*

In this dissertation, I will elaborate on the unique experiences of newcomer Arabic-speaking refugee youth in Germany, belonging to the 1.5 generation[16]. I will start by situating

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[15] Southern Sudanese, Western Saharan Polisario front refugees, and Ghanaians.
[16] To my knowledge, this term has not yet been used to characterize young Arabic-speaking refugees.

my research with refugee youth within the discipline of developmental psychology. Specifically, I will elaborate on relevant ecological and cultural perspectives and their fit for research with refugee youth. Next, I will incorporate a clinical psychology perspective focusing on refugee youth mental health, coping and resilience and highlight findings and gaps relevant for the population of my dissertation. Finally, I will introduce a behavioural psychology perspective and expand on factors influencing refugee youth preferences, namely their risk-taking, patience, and social preferences. Throughout the remainder of this chapter, I will highlight the way these different perspectives inform and enrich research with refugee youth experiences and refer to the empirical chapters of this dissertation whenever relevant.

**1.3 A developmental perspective on refugee youth**

From infancy to old age, human beings set on a lifelong developmental journey. Every stage of human development is associated with a set of developmental goals that represent societies' and communities' expectations of an individual of that age (A. S. Masten, 2015). Broadly speaking, it could be argued that across the different developmental stages of an individual, three main tasks continue to be of significance, namely relationship formation, knowledge acquisition, and balancing autonomy and relatedness (Greenfield et al., 2003). While the first two begin in infancy, the later emerges in adolescence (Kagitcibasi, 2005). This dissertation focuses on adolescence, a developmental stage when children no longer need their parents to fulfil their basic needs (Greenfield et al., 2003). And although at this stage adolescents are able to contribute to their society and the wellbeing of others, they have not yet attained full self-efficacy, a marker for entering adulthood (ibid.).

This stage is also known as a time of change occuring in all domains of adolescents' life. Many cognitive process that started in childhood continue to evolve during adolescence reaching a more sophisticated level (Malti et al., 2021). According to cognitive research (Blakemore & Mills, 2014; Choudhury et al., 2006; Schneider & Lindenberger, 2018;

Steinberg, 2005), main developments include *increased abstract thinking* which facilitates their comprehension of intricate concepts and enables their participation in more sophisticated forms of reasoning. *Improved executive function* such as problem-solving, planning, and decision-making aids adolescents in coping with the progressively intricate demands of their lives. *Enhanced metacognition* enables them to introspect on their own thoughts and modify their behaviour correspondingly. *Greater mental flexibility* which affords adolescents the ability to switch perspectives, consider multiple viewpoints, and therefore arrive at creative solutions to the problems at hand. *Increased brain plasticity* allows novel experiences and newly gained knowledge to exert a greater influence. These vital cognitive developments enable adolescents to venture into new social spaces and experiment with novel ideas.

In addition to the above-mentioned cognitive developments, adolescents with a history of migration experience particularly accelerated maturation in perspective taking and moral development (Jugert & Titzmann, 2020). Immigrant adolescents have a potential advantage compared to non-immigrant adolescents in cultivating perspective-taking abilities through their engagement in more adult spaces while they translate for their immigrant parents, i.e., via language brokering (ibid.). Immigrant adolescents inhabit and navigate two cultural spaces, that of their new country of residence and of their country of origin, this experience increases their capacity for empathy and their ability to understand varying cultural values (Kam et al., 2017).

Adolescence is also a time of significant change in the social environment, including at home, with peers, and at school. In contrast to childhood, where parents or primary caregivers represent the central social partners in a child's life, during adolescence children grow less dependent on their caregivers (Greenfield et al., 2003). Additionally a longing to form meaningful connections with peers starts to emerge (Petersen, 1988). Building friendships and establishing a sense of belonging to a social group during adolescence is a central aspect of this

developmental stage (ibid.). It is associated with important developmental outcomes such as social identity formation, adjustment, and wellbeing (Correa-Velez et al., 2010; Juang et al., 2018; Schachner et al., 2019). Adolescents start to value the perspective of their friends over that of their parents regarding specific activities they wish to pursue in order to fit in with their peers, e.g. the media and music they consume and the way they navigate their social world (Blakemore & Mills, 2014; Lew-Levy et al., 2023). The tendency to conform to peer influence peaks in early adolescence (Blakemore & Mills, 2014; Molleman et al., 2022). Importantly, different peers have the potential to influence adolescents towards the maintenance or violation of social norms (Molleman et al., 2022). This highlights the potential of social networks as contexts for social learning (ibid.) (peers influences on preferences are elaborated in section 1.5 and chapter 4).

Another important aspect of peer relations in adolescence is peer evaluations. Receiving negative evaluations and exclusion cues from peers has negative influence on adolescents' perception of their own self-worth, this in turn has negative consequences for their wellbeing (Blakemore & Mills, 2014) (the impact of social isolation on adolescents' mental health will be further elaborated in section 1.4). In the case of refugee adolescents, separation from peer networks at their home country is a particularly challenging experience (Suárez-Orozco & Todorova, 2003). However, accessing social networks (friends, peers and teachers) supports refugee youth adaptation and wellbeing in their new country of residence (Alhaddad, Schachner, et al., 2021; Bešić et al., 2020; Meyer et al., 2023) (a more detailed review on refugee youth social networks in chapter 2 and 3).

Taken together, adolescents begin to experience an "independence" from their parents at this developmental stage. Balancing this need for independence while maintaining relatedness and supportive relationships with parents is necessary for adolescents to start

forming their own identities (Kagitcibasi, 2017). However, this independence is emphasized differently across different cultural contexts (Keller, 2012).

Human development does not occur in a universal context that applies to every developing individual, but rather in a more cultural local context (Miller, 2005). Consequently, culture influences the trajectory of individuals' development, and the way certain developmental goals (such as redefining the relationship with parent) are fulfilled. Researchers observed two different cultural pathways through development, namely an independent and an interdependent developmental pathway (Greenfield et al., 2003). According to Greenfield (2003), in an independent developmental pathway, individuals are able to negotiate social obligations, decide whether to and how to engage in social relationships. Whereas in an interdependent developmental pathway, individual decisions are less important and social obligations are prioritized. As such, each of these two pathways ascribes a different value to attaining autonomy versus fostering relatedness, respectively (Kagitcibasi, 2017).

Importantly, the context for the development of autonomy and relatedness is informed by cultural milieus and not countries (Keller, 2012). Consequently, different cultural milieus within a society would foster different developmental pathways (ibid.). Adolescents' relationships with their parents and the balance they strive to achieve between autonomy and relatedness is shaped differently in different familial, cultural, and socio-economical contexts. In the US., Fuligni et al (1999) examined families with and without a European heritage and reported that adolescents growing up in non-European heritage families, e.g. Latin, Asian, felt a stronger obligation towards their families than their peers. This was heightened in recently arrived families, where adolescents expressed a strong familial obligation due to the gap between parents and children language abilities in the new society. Another important factor was the gratitude children felt to their parents for migrating to secure a better life for their children and the sacrifices that entailed for them (Fuligni et al., 1999). These findings suggest

that cultural and immigration status inform whether adolescents would develop along an independent pathway (valuing autonomy) or an interdependent pathway (valuing familial obligation). In addition, research on ethnic minorities in the Global North highlight the role of higher socioeconomic status and educational background on more individualistic orientations (Greenfield et al., 2003; Kagitcibasi, 2005).

This dissertation focused on the experiences of Arabic-speaking refugee adolescents. The previously discussed findings, *cf. supra*, imply that the case for Arabic-speaking adolescents in Germany might be similar to that of their Global South peers living in the US. In other words, it may be posited that Arabic-speaking refugee youth residing in Germany, a society characterized by dominant independent developmental values (Keller et al., 2006), would be developing along an interdependent pathway. This mismatch could create a gap between familial and peers expectations of refugee youth (see chapter 2 for a more detailed review). Further research is sorely needed to substantiate these findings with an Arabic-speaking population and to elaborate on the different developmental pathways that exist within this highly diverse population (Saab et al., 2022). At the end of this section, I will further elaborate on the lack of representation of Arabic-speaking populations in developmental research and how it pertains to this research project (see section 1.3.3).

Refugee adolescents experience other layers of change within their families that are uniquely related to their immigration status, namely family separation and financial difficulties. Family separation occurs when young refugees set off on their refugee journey unaccompanied or accompanied by one parent. The length of such separation depends on political decisions regarding family reunification laws (Dockery, 2017; Muller et al., 2019). Family separation is considered one of the most reported stressors for young refugees with detrimental impact on their mental health and negative influence on education (Fazel et al., 2012; Muller et al., 2019; Suárez-Orozco et al., 2011). Living without a parent could be disorienting for young refugees.

Consequences might include loss of heritage-culture resources that would help them understand the world around them and their place in it (Suárez-Orozco & Todorova, 2003). Separation from extended family members is another form of separation with the potential of jeopardizing young refugees' sense of belonging to their heritage culture and community (ibid.). Developmental psychologists explain this link by describing the role of familial socialization as the intermediate level link between culture and the developing individual (Kagitcibasi, 2017; Keller et al., 2006).

In addition to change in family composition, a change in financial situation is common in refugee families. Although some refugee families originally come from low-income backgrounds, others experience downward social mobility in their new country of residence. Reasons include the difficulty parents experience integrating into the job market and challenges related to their legal status (Gowayed, 2022). In addition to unemployment's impact on parental mental health (Fazel et al., 2012), a challenging financial situation could limit young refugees access to activities and resources needed to fit in and form connections with their local peer group (Alami, 2020; Suárez-Orozco & Todorova, 2003) (a more detailed review on family separation, and financial and legal situation in chapter 2)

In brief, adolescents are at an important developmental stage, where change is prevalent in all domains and redefying old relationships and building new ones is of great significance. Yet, refugee adolescents' vital relationships undergo additional changes due to their refugee history. Factors particularly relevant to refugee youth include differences in cultural values, practices, and age-appropriate developmental goals. Other factors are related to political and governmental conditions, such as family separation, financial situation, and chances for social upward mobility. The following section will examine possible theoretical organizations of these environmental factors and their fit to research with refugee youth.

**1.3.1 The social environment of refugee youth**

The earlier section examined and challenged universal claims of development, specifically regarding developmental goals. Indeed, the discipline of developmental psychology was for an extended period of its history mainly focused on investigating the universality of development. This was achieved by examining developing individuals in isolation in laboratory conditions (Super & Harkness, 1986). These endeavours were famously described as "the science of the strange behavior of children in strange situations with strange adults for the briefest possible periods of time" (Bronfenbrenner, 1977, p. 153). It was important contributions, such as works by Lev Vygotsky and John and Beatrice Whiting among others, that started a a "contextual revolution" (García Coll, 2022, p. 678) in the discipline by exploring the interaction of culture and development (Broesch et al., 2022). Consequently, the developing individual was observed not separately from their context but rather at the centre of their natural, cultural, social, and historical environment. One influential framework representing this shift is Urie Bronfenbrenner's ecological systems theory (Bronfenbrenner, 1979). Bronfenbrenner's theory benefitted greatly from previous scholarship including Kurt Lewin's Field Theory (Lewin, 1936). Rooted in Gestalt theories, Lewin's work emphasized the importance of environmental factors in shaping perception and behaviour and introduced concepts such as force fields and life space.

The ecological systems theory expanded on Lewin's work by describing individual development as shaped by broader dynamic social and cultural contexts, such as historical trends, political systems, and economic conditions. In addition, it emphasized the active role of the individual placed at the centre of the person-process-context model (Darling, 2007). According to Bronfenbrenner (1979), the ecology of human development involves:

> *the progressive, mutual accommodation between an active, growing human*
>
> *being and the changing properties of the immediate settings in which the*

*developing person lives, as this process is affected by relations between*

*these settings, and by the larger contexts in which the settings are*

*embedded. (p. 21)*

This theory organises the domains of development in nested levels: *the microsystem* is at the center of the nested model and includes the immediate environments an individual inhabits, such as their family, school, and peer group. *The mesosystem* refers to the relations and interactions between two or more microsystems. *The exosystem* represents broader social structures that indirectly influence an individual's development, such as the media, government policies. *The macrosystem* refers to the larger cultural, economic, and political context in which development occurs. It includes cultural values, beliefs, and norms, as well as historical and geographical factors that shape an individual's experiences.

This representation of development in nested interacting levels is a helpful theoretical organisation of the interrelated events and challenges young refugees experience across all social contexts they inhabit (Lustig, 2010). The second chapter of this dissertation benefited greatly from this theoretical perspective in organising its qualitative findings on the main challenges experienced by refugee youth in Germany. Additionally, this theory informed an important risk and resilience model (Suárez-Orozco et al., 2018) and a socio-ecological perspective on human resilience (Ungar et al., 2013), both of which will be elaborated on later within this introductory chapter (in sections 1.3.2 and 1.4.2 respectively). Michael Ungar's work on the social ecology of resilience informed the conceptualisation of the empirical study of refugee youth resilience (presented in chapter 3 of this dissertation).

## 1.3.2 Cultural contact and refugee youth

*As they got further away from home, the Syrians seeking refuge would get further*

*from the people they loved, and from those with whom they shared the familiarity of language*

*or culture. The safer they got, the stranger they felt.* (Gowayed, 2022, p. 19)

One aspect of the refugee experience that the ecological systems theory does not fully account for is intercultural contact, described in the quote above. As discussed before, the ecological systems theory includes overarching cultural perspectives in the macro system. However, it does not necessarily account for contact of (potentially) incompatible cultures. Refugee youth encounter two sets of cultural perspectives, one of the country they currently live in and one of their heritage country.

Broadly speaking, culture can be conceptualized as "a socially interactive process of construction comprising two main components: shared activity (cultural practices) and shared meaning (cultural interpretation)" (Greenfield et al., 2003, p. 462). As young refugees resettle in their new country, they encounter new cultural contexts. And though young refugees may not always be born in their country of heritage, they continue to be in contact with their heritage cultural practices and interpretations via the familial socialization process (Kagitcibasi, 2017). This cultural contact triggers a process of negotiating the norms, values, beliefs, and practices of both cultures termed "acculturation" (Redfield et al., 1936). The most discussed psychological theory of immigrant youth acculturation is that of Berry and colleagues (2006).

Berry's acculturation framework proposes four acculturation strategies classified along two dimensions: maintenance of heritage culture and adoption of resettlement country's culture. Based on these dimensions, four distinct acculturation orientations can be identified: assimilation, separation, integration, and marginalization. *Assimilation* occurs when individuals adopt the culture of the resettlement country while relinquishing their heritage culture. *Separation* involves the opposite, where individuals retain their heritage culture while rejecting the culture of the resettlement country. *Integration* refers to the adoption of both cultures, while *marginalization* occurs when individuals do not adopt either culture.

This theory of acculturation has been criticised for its universal claims, i.e. suggesting that all migrants groups irrespective of their new country of residence undergo a similar

psychological process (Bhatia & Ram, 2001; Chirkov, 2009). An intersectionality perspective suggests that gender, race, class, along with migration status constitute inequalities that are experienced simultaneously (Crenshaw, 1991; Gowayed, 2022; Moffitt et al., 2020). This perspective contradicts the universal claim of acculturation models, which not only equates the experiences of migrants from previously colonized Global South countries with those of migrants from the Global North, but also overlooks the historical context of the new country of residence (Bhatia & Ram, 2001). When refugees and migrants arrive to their country of resettlement, they join the specific history and heritage of their respective ethnic group in that country (Bhatia & Ram, 2001). In other words, Muslim refugees and immigrants in the US are immediately faced with post 9/11, post ISIS Anti-Muslim sentiments. Whereas, Muslim refugees and immigrants in Germany deal with the potential repercussions of a specific history of Muslim Turkish "guest workers" (Gowayed, 2022) (elaborated in section 1.1.1).

Another important critique of Berry's Acculturation Model revolves around the lack of contemplation on the construct of culture (Chirkov, 2009). Instead, both *heritage culture* and *mainstream culture* are operationalized on the national level (Bhatia & Ram, 2001). This raises its own sets of problems, on the one hand contents of mainstream culture in countries of resettlements, for example in Germany, often include exclusively White German cultural elements (Moffitt et al., 2018). One the other hand, and as established in the previous section, countries of resettlement, such as Germany, do not represent a homogenous cultural context (Destatis, 2021).

Similar to the challenge of defining mainstream culture, the concept of heritage culture is equally vague, particularly in regard to the heritage culture(s) of Arabic-speaking refugee youth. There is an evident absence of indigenous theoretical frameworks on the development and integration of religious, ethnic, racial, cultural and national identities in the Arabic-speaking region (Saab et al., 2020). This is compounded by the lack of representation of the

Arabic-speaking region in psychological research (elaborated next in section 1.3.3.). As a result, research exploring the heritage culture of Arabic-speaking refugee youth would either engage with an unchallenged orientalist discourse (constructed mainly by Europeans scholars) surrounding the culture(s) of this region (Harb, 2016), or fall under the problematic category of non-theory-driven research[17] (Kagitcibasi, 2017).

Theoretical perspectives discussed thus far in this chapter have recently been integrated and specified for the development of immigrant-origin children and youth in the Risk and Resilience Model developed by Suárez and colleagues (2018). This framework expands on the ecological perspective (Bronfenbrenner & Morris, 2006) by incorporating valuable theoretical contributions on development of minority children and children at risk, e.g., Ann Masten's resilience framework (A. S. Masten, 2015) and the integrative model for the study of developmental competencies in minority children (Coll et al., 1996). Three aspects of this model make it helpful for research with a refugee youth population. First, it acknowledges that the development of young immigrants and refugees occurs not only in the political and social context of their resettlement countries but also in a global context where ideologies (such as islamophobia and xenophobia), socioeconomic inequality, and intercultural contact are prevalent. Second, on the individual level the model incorporates perspectives of development, acculturation, and psychological adjustment (mental health and wellbeing). Finally, also on the individual level, the model emphasizes the need for an intersectional perspective that includes the dimension of legal status.

The current section of this dissertation has thus far explored theoretical frameworks most relevant to the study of refugee youth experience and shed light on their fit and shortcomings. In the next section I will elaborate on systemic issues relating to diversity and

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[17] Kağıtçıbaşı notes that this type of research is prevalent particularly in low-income countries.

representation within the psychological research in general and developmental psychology in particular. Implications for research with Arabic-speaking refugee youth will be elaborated.

### 1.3.3 Limitations in psychological research with impact on refugee youth research - the crisis of representation.

*"Looking West for theory and East for data" (Kagitcibasi, 2017, p. 212)*

The Turkish developmental psychologist Çiğdem Kağıtçıbaşı uses the term "Majority World" in her writing to refer to non-Western populations and highlight that they represent the majority of the world population. Evidence from psychological research in general (Arnett, 2008; Henrich et al., 2010; Rad et al., 2018) and developmental psychology in particular (M. Nielsen et al., 2017), suggests that participants from the majority world are rarely present in research studies. The review by Nielsen et al. (2017) found that the *less than 3%* of the participants in reviewed studies on children's psychological development came from *all* of Central and South America, Africa, Asia, and the Middle East and Israel combined, these regions represent 85% of the world's population. Furthermore, when Majority World participants are recruited in psychological studies examining cultural differences, these studies are mostly conceptualized to test whether Western-based findings apply to other populations ("Towards a Global Psychological Science," 2022). Consequently, these studies not only produce science that could be considered irrelevant to the populations where it is tested, but also reestablishes neocolonial dynamics (Singh, 2022).

Research on authorships in psychological studies further highlights the gap of representation. None of the studies reviewed by Nielsen and colleagues had a first author located in the Middle East or Africa (M. Nielsen et al., 2017). Even when research studies includes samples from low- and/or middle- income countries, authors from those regions are

typically excluded from the list of authors, dangerously jeopardizing the appropriateness of cultural interpretation derived from such studies (Singh, 2022).

Achieving diversity in psychological research necessitates psychological studies to not only recruit diverse samples (and disclose detailed descriptions of their sample), but also to include diverse authors in planning, implementing and interpreting finding from these studies (Syed & Kathawalla, 2022). Finally, it requires the exploration of diverse theoretical perspectives including indigenous psychologies (ibid.). Regarding the research project of this dissertation, research with young refugees is strongly based on western theories that were developed without including Arabic speaking populations, as demonstrated by reviews discussed above.

## 1.4 A mental health perspective on refugee youth

> *"[…] It is important to remember the obvious fact that becoming a refugee*
>
> *is not a psychological phenomenon per se; rather, it is exclusively a socio-*
>
> *political and legal one, with psychological implications"*(Papadopoulos,
>
> 2007, p. 301) *as cited in* (Walther, 2021)

In the previous section, I elaborated on the Integrative Risk and Resilience Model (Suárez-Orozco et al., 2018), which emphasises the importance of exploring the development, acculturation, and mental health context to gain a better understanding of the experiences of refugee youth and their adaptation. Mental health is commonly examined alongside these two processes as a predictor for successful adaptation or an outcome of unsuccessful adaptation (Walther, 2021). Refugee youth mental health is an important context for the empirical papers presented in this dissertation. Specifically, I explore two complimentary angels of refugee youth mental health, first as an influence on refugee youth preferences (empirical study empirical presented in chapter 4). Second, I examine how refugee youth mental health is influenced by both potentially traumatic exposure and resilience (study presented in chapter 3).

In this section, I will broadly introduce the construct of mental health and specific factors of adolescent mental health. Next, I will narrowly elaborate on the specific case for refugee youth mental health and relevant cultural considerations. I will end with an examination of the deficit narrative prevalent in the field and the importance of emphasizing a strength perspective that centres refugees' coping and resilience.

The world health organisation defines mental health as "a state of mental well-being that enables people to cope with the stresses of life, realize their abilities, learn well and work well, and contribute to their community." (WHO, 2004), as cited in the Lancet commission on global mental health (V. Patel et al., 2018). Mental health disorders could be broadly defined as "disturbances of thought, emotion, behaviour, and relationships with others that lead to substantial suffering and functional impairment in one or more major life activities" (V. Patel et al., 2018).

Adolescence is a particularly important developmental stage for the onset of mental health disorder (Kessler et al., 2005; Solmi et al., 2022). It is estimated that one in seven adolescents between the ages of 10 and 19 experience mental health challenges (WHO, 2021). This phenomenon is related to biological and social aspects of adolescence. On the one hand, neural development in the prefrontal cortex during adolescence increases adolescents' vulnerability to psychiatric disorders (Blakemore & Mills, 2014). On the other hand, adolescence is a period of changes in all social domains (as established earlier in section 1.3). Subsequently, the pressure they experience to fit in socially with their new peer groups and avoid social isolation is considered a risk factor for emotional distress for this age group (Blakemore & Mills, 2014; C. L. Masten et al., 2009).

Refugee youth experience an added layer of risk to their mental health due to their potential exposure to adversity (Fazel et al., 2012). In their home country, people (who later become refugees) commonly report exposure to numerous adverse experiences. According to

two systemic reviews on the mental health of children and adolescent refugees (Fazel et al., 2012; Scharpf et al., 2021), commonly reported experiences include exposure to a battlefield, violence related events, torture, detention, gender-based violence and prosecution. Additionally, separation or loss of family members, malnutrition, are common (ibid.).

It is these events that drive people to set off on the perilous flight to seek refuge in countries with establishes refugee protection frameworks. During this journey, they are in a constant state of fear and uncertainty as they depend on smugglers to cross borders and evade borders authorities (Parekh, 2020). As they navigate the different geographical and political landscapes on their way to their destination country challenging living conditions are prevalent (Arsenijević et al., 2017). Refugees report lack of food and water, challenging financial situation, sexual violence, ill-treatment by smugglers, violence from authorities, in addition to the risk of separation from their families (Arsenijević et al., 2017; Fazel et al., 2012; Lustig, 2010; Müller, Büter, et al., 2019; Scharpf et al., 2021) (potentially traumatic events experienced by Arabic-speaking refugee youth are reported in empirical studies presented in chapter 3 and 4).

Finally, young refugees who survive the arduous journey are faced with a new set of stressors upon arriving at their country of resettlement. They are frequently relocated between different accommodation centers and at times between different states and hosted in large, overcrowded accommodation centers with varied levels of support (Jakobsen et al., 2017; Lechner, 2017) (refugee youth experiences in accommodation centers in Germany are reviewed in the qualitative study presented in chapter 2). Furthermore, young refugees commonly experience discrimination, poverty, limited access to education and health care based on their legal status, in addition to the precarious process of seeking asylum and navigating complicated administrative hurdles (Dangmann et al., 2021; Fazel et al., 2012;

Graef-Calliess et al., 2023; Lechner, 2017; Lustig, 2010; Scharpf et al., 2021; Spaas et al., 2022).

The accumulated exposure to potentially traumatic experiences at home and during the flight journey in addition to on-going post migration stressors have detrimental impact on refugee youth mental health leading to a high prevalence of mental health problems (Bronstein & Montgomery, 2011a; Bryant et al., 2023). In the next section I will elaborate on the most common mental health outcomes following traumatic exposure and their respective prevalence rates in refugee youth groups residing in countries similar to Germany; the country where the empirical studies of this dissertation were conducted.

Post-Traumatic Stress Disorder, PTSD, and depression represent two of the most commonly diagnosed mental health disorders within young refugees residing in European countries (Kien et al., 2019) and more specifically in Germany (Müller, Büter, et al., 2019). The DSM-5 diagnostic criteria for PTSD require the presence of a traumatic event[18], followed by intrusive symptoms such as upsetting memories, dreams, dissociative reactions, and physiological reactions. Additionally, individuals persistently avoid cues related to the traumatic experience(s) and may experience negative mood and cognitive changes such as self-blame, detachment, and loss of interest. Changes in arousal and reactivity can occur, including irritability, hypervigilance, and sleep disturbances. These symptoms must persist for more than one month, cause distress or impairment in important areas of functioning, and cannot be attributed to substance use or medical conditions (American Psychiatric Association, 2013).

Regarding depression, the DSM 5 categorizes various depressive disorders, and the diagnosis of Major Depressive Episode (MDE) depends on five criteria. The adolescent must

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[18] Traumatic events, according to the DSM5, involve exposure to actual or threatened death, serious injury, or sexual violence. These events could be directly experienced, witnessed, or reported by family and friends subsequently causing intense fear and helplessness (American Psychiatric Association, 2013).

experience at least five of the mentioned symptoms nearly every day for a minimum of two weeks. The symptoms include (1) depressed or irritable mood or (2) loss of interest or pleasure, (3) change in weight or appetite, (4) insomnia or hypersomnia, (5) psychomotor agitation or retardation, (6) loss of energy, (7) feeling guilty or worthless, and (8) recurrent thoughts of death or suicide. Importantly, the first two symptoms (depressed mood and loss of interest) are considered core symptoms. At least one of these two core symptoms must be present for a possible depression diagnosis.

Prevalence rates of these mental health disorders in refugee population are inconsistent. This discrepancy is due to varying methodologies and populations such as sample size, length of stay in resettlement country at the time of assessment, and the use of self-report measures vs. structured clinical interviews (Kien et al., 2019). According to a review, adolescent refugees commonly report lower rates of PTSD compared to adult refugees (Fazel et al., 2012). In a systematic review of the prevalence rates PTSD in young refugees residing in European countries the rate of posttraumatic stress disorder was between 19.0 and 52.7%, and for depression between 10.3 and 32.8% (Kien et al., 2019).

### 1.4.1 Context, culture, and refugee youth mental health

In this section I will highlight important context related factors that should be taken into account when discussing refugee youth mental health. I will start by discussing the context of the resettlement country. Next, I will take a broader perspective and discuss the context of Western conceptualisation of mental health and possible considerations when working with refugee youth. Finally, I will elaborate on the deficit narrative and the importance of a strength-based examination of refugees' mental health.

Previously discussed post-migration stressors experienced in the destination country have been repeatedly found to influence the mental health of refugees (Bryant et al., 2023; Dangmann et al., 2021; Graef-Calliess et al., 2023; Walther, 2021). Arabic speaking refugee

youth, the focus of this dissertation, experience potentially different post- migration stressors a high-income country such as Germany compared to other receiving countries such as Lebanon, a low-middle income country. There, young refugees are faced with a different set of post-migration stressors including political violence, and particularly for girls the pressure of early marriage and lack of safe mobility (DeJong et al., 2017). It is therefore helpful to consider the context of the resettlement country when comparing the prevalence of mental health disorders among young refugee populations across different receiving countries. To provide a comprehensive overview of the literature in this section, as well as the empirical studies on mental health (presented in chapters 3 and 4), I have primarily concentrated on previous research conducted within similar contexts to Germany.

Another important point of consideration is the applicability of diagnosis criteria developed in Western contexts to refugees from diverse cultural backgrounds. First, research suggests cultural differences in the way emotions are displayed, discussed and regulated, influencing the way psychological symptoms are presented across cultures (Kirmayer et al., 2011), for an example specific to Arabic-speaking adult refugees check (Hassan et al., 2015). Secondly, it is crucial to acknowledge that culture exists on both side of mental health services, i.e. culture does not exist solely in the non-Western patient but also in the Western mental health practitioner and the western conceptualization of mental health theories as a whole (Kirmayer, 2001). Research suggest that non-Western cultures, i.e., the majority world, have conceptualizations of mental health disorders which diverge from the Western diagnosis criteria (Aggarwal, 2023), such conceptualizations are evident in research with refugees too (Bryant et al., 2023). This dissertation's attempt to bridge this gap is limited to utilizing mental health measures that were validated for the use with refugee populations (a record of the mental health measures used and a review of their validation studies elaborated in chapter 4).

Contemplations on the mental health state of refugees are necessary to inform the development of intervention and protective programs for vulnerable groups. However, the investigation of refugee youth mental health is tasked with maintaining a delicate balance between identifying refugee youth's needs and acknowledging their power and agency over their circumstances (Brough et al., 2003). This is particularly important given that most refugees do well (Güngör & Strohmeier, 2020). In other words, it is important to be weary of victimization and deficit narrative. To this end, this dissertation aims to challenge the deficit perspective by shedding light on the prevalent coping and resilience within refugee populations, which will be elaborated next (section 1.4.2.).

Finally, interventions focused solely on the individual level run the risk of pathologizing refugees' lived experiences by assuming their mental health symptoms are abnormal. The lived experiences of refugee youth are far from normal, and as put by Vitor Frankel: "An abnormal reaction to an abnormal situation is normal behavior." (Frankl, 1988, p. 38). Accordingly, viewing mental health disorders as maladaptive could be reductive. Young people disadvantaged by prevailing power structures due to race, gender, mobility, religion, legal status, and financial status are more likely to manifest mental health problems (Robinson & Schmitz, 2021; Vaid & Lansing, 2020). Contextualizing these mental health symptoms would lead to reframing them as an appropriate response to circumstances that challenge safety, opportunities, and prosperity of certain groups (Ajrouch et al., 2020). As such, it is vital that researchers do not ignore broader social and political contexts influencing refugee youth mental health (Brough et al., 2003).

### 1.4.2 Coping and resilience of refugee youth

The perseverance of young people in the face of difficult odds has always been a popular topic for traditional folktales and modern stories, with the interest in such tales surging during times of adversity (A. S. Masten, 2015). To understand the way young people cope with

such calamities, it would be necessary to first understand what adequate adaptation means in developmental terms. According to Masten (2015), there are two prevailing criteria to assess the phenomena of positive adjustment. The first one is a developmental perspective focused on the successful fulfillment of age salient developmental tasks. These tasks represent expectations embedded in social, historical, and cultural contexts (elaborated in section 1.3). The second criterion involves a mental health perspective centered around the manifestations of psychological symptoms. In other words, young people are considered well-adjusted when they do not report mental health disorders and meet the expectations their community and family hold for their age group (A. S. Masten, 2015; Ungar & Theron, 2020).

Here it is important to highlight that positive adjustment occurs in the context of stable conditions, however people demonstrate coping and resilience when exposed to adversity (Motti-Stefanidi & Masten, 2017; Rutter, 2007; Ungar & Theron, 2020). In other words, scholars agree that exposure to adversity is a necessary criterion to define coping and resilience. Stressful experiences are classified in two categories, chronic and traumatic. The ability to respond positively to low levels of chronic stress is a characteristic of coping. However, when faced with traumatic experiences, positive responses would be classified as resilience (Ungar & Theron, 2020). In the coming section I will introduce theoretical understandings of coping and resilience.

### *Coping*

One of the most important theoretical contributions in the field of coping research is that of Richard Lazarus and Suzan Folkman. In their (1984) book, their transactional stress theory suggests that stress is not a direct response to a particular event, but rather a transactional process that involves the appraisal of an event and the individual's coping resources. Individuals experience stress when they perceive that the demands of a situation exceed their coping resources. As such, challenging situations potentially motivate individuals to develop

coping strategies in order to manage the resulting behavioral demands and emotional responses (Lazarus & Folkman, 1984).

There are two components to the construct of coping, coping strategies and coping resources. Coping resources refer to individual and social capacities that individuals tap into to manage stressors (Thoits, 1995). These coping resources represent possibilities for individuals rather than actions. However, they are expected to influence the choice and/or the effectiveness of the coping strategies. Coping strategies could be understood as what individuals do in order to deal with the challenges they face. It is therefore considered a mediating mechanisms giving rise to resilience (Rutter, 2007). Lazarus and Folkman identified two main types of coping strategies: *problem-focused coping* and *emotion-focused coping*. Problem-focused coping involves attempting to solve the problem that is causing the stress, while emotion-focused coping aims to regulate the emotional response to the stressor (Lazarus & Folkman, 1984).

Research suggests that the coping strategies immigrant and refugee youth implement when dealing with the challenges of their new lives depend on factors such as the type of stressful event , their ability to challenge it, and relevant past experiences (Behrendt et al., 2023; Muller et al., 2019; Yakushko, 2010). Social support from family members, relatives, friends, and peers has been identified as a vital resource for refugee youth (Behrendt et al., 2023; Muller et al., 2019; Verelst et al., 2022) (a detailed review on refugee youth coping in chapter 2).

### Resilience

To introduce the construct of resilience I will start by sharing a folktale and a fable quoted from Mahdiani's (2021) book "Resilience Stories: Individualized Tales of a Metanarrative", and then proceed to reflect on the way they relate to modern perspectives on resilience.

### The Two Wolves – an indigenous folktale[19]

*An old Cherokee was teaching his grandchildren about life. He said, "A battle is raging inside me…it is a terrible fight between two wolves. One wolf represents fear, anger, envy, sorrow, regret, greed, arrogance, self-pity, guilt, resentment, inferiority, lies, false pride, superiority, and ego. The other stands for joy, peace, love, hope, sharing, serenity, humility, kindness, benevolence, friendship, empathy, generosity, truth, compassion, and faith." The old man looked at the children with a firm stare. "This same fight is going on inside you, and inside every other person, too." They thought about it for a minute, and then one child asked his grandfather, "Which wolf will win?" The old Cherokee replied: "The one you feed".*

### The Farmer and the Donkey- a fable[20]

*One day a farmer's donkey fell down a well. The animal cried piteously for hours as the farmer tried to figure out what to do. Finally, he decided the animal was old, and the well needed to be covered up anyway – it just wasn't worth it to retrieve the donkey. He invited all of his neighbors to come over and help him. They each grabbed a shovel and began to throw dirt into the well. At first, the donkey realized what was happening and cried horribly. Then, to everyone's amazement, he quieted down. A few shovel-loads later, the farmer finally looked down the well. He was astonished at what he saw. With each shovelful of dirt that hit his back, the donkey was doing something amazing. He would shake it off and take a step up. As the farmer's neighbors*

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[19] Quoted from (Mahdiani, 2021, p. 13)
[20] Quoted from (Mahdiani, 2021, p. 14)

*continued to shovel dirt on top of the animal, he would shake it off and take*

*a step up. Pretty soon, everyone was amazed as the donkey stepped up over*

*the edge of the well and happily trotted off!*

On a first glance both tales seem to imply that it is the individual's responsibility to act resiliently in the face of challenges whether by feeding the corresponding wolve, or by coming up with creative solutions to problems such as that of the donkey. Yet, upon looking closer the first tale narrator, the grandfather, emerges as a representative of family, community, and indigenous knowledge passed between generations, all of which are valuable resources that have been elaborated on in different sections of this chapter. In the second tale, resources from the environment were crucial for the donkey to overcome the ordeal.

The history of resilience research tells a similar story. Situated at the intersection of developmental and clinical psychology, this research field peaked following the events of WW2 (Ungar & Theron, 2020). The field experienced different waves of research interests (A. S. Masten et al., 2023). It was at first centred around disadvantaged children and youth who defied the odds of their circumstances. Research then was aimed at defining and measuring the phenomenon of resilience in the context of adversity and attempting to identify the predictors of resilience (e.g., Emmy Werner's (1989a, 1989b) longitudinal study on children growing up on the Hawaiian island of Kauai). Later, research shifted attention to understanding the processes that lead to resilience and identifying the protective, promotive, or preventive factors that support positive development in high-risk children and youth- recent examples of this line of research with a focus on refugee populations (Arnetz et al., 2013; Mohamed & Thomas, 2017). These findings were then used to develop interventions to promote resilience particularly with vulnerable groups, (e.g. Ungar, 2019). Modern resilience research features two interesting perspectives, one emphasizes the importance of considering the context in which resilience is developed, including the ecological systems that shape individuals'

experiences and the resources that are available to them, (e.g. Ungar et al., 2023). The second one stresses the complex interactions between genes, experience, person, and contexts (A. S. Masten et al., 2023) (the third chapter of this dissertation implements a socio-ecological framework of resilience and features a detailed review on resilience research in the context of refugee youth).

In conclusion, research on resilience and coping responses presents an important direction for refugee mental health research as a whole. Findings highlighting the protective influence of resilience on mental health problems, as well as the preventive role of adaptive coping, carry significant implications for the delivery of psychotherapy and counselling services to refugees (Kalaf & Plante, 2020; Mancini & Bonanno, 2006; Yakushko et al., 2008). A focus on building resources on the individual, family, and community level is becoming a priority for mental health programs supporting refugees (Kira & Tummala-Narra, 2015; Walsh, 2021).

This section has focused on coping and resilience as an adaptive response to varying levels of challenging circumstances. Another well documented aspect of resilience commonly observed in refugees and survivors of adversity is prosocial behaviors. This aspect will be discussed in the next section.

## 1.5 A behavioral perspective on refugee youth preferences

Adolescents' social environments have been discussed at length in different parts of this chapter as a resource as well as a challenge. An important aspect that has not yet been elaborated is their active involvement in their social groups. An ecological perspective on development suggests that children assume an active role as agents and processors within their own experiences, and in doing so they effectively shape their own development (Bronfenbrenner & Morris, 2006). An active and helpful exchange between adolescents and

their environment is also considered a mark of resilience and agency (Lerner, 2006). Such interactions could be manifested through acts of helping others known as prosocial behaviour.

Prosociality includes behaviours such as altruism, along with positive and negative reciprocity (elaborated in chapter 4). These actions serve as fundamental indicators of social wellbeing and moral character, additionally informing the way adolescents build relationships with others, including their family and peers (Carlo & Padilla-Walker, 2020). A preference towards prosociality could be observed in infants, even at 3 months old, (Rose et al., 2022). It continues to develop throughout childhood due to developments in moral reasoning, emotion regulation, and sympathy, peaking in mid-adolescence (Carlo et al., 2015; Carlo & Padilla-Walker, 2020; Malti et al., 2021; Padilla-Walker & Christensen, 2011) (cognitive development during adolescence reviewed in section 1.3). Adolescence is therefore an important stage for the study of prosocial behaviour.

Such behaviours are vital for the promotion of wellbeing at times of adversity, via facilitating a sense of community and belonging (Carlo & Padilla-Walker, 2020; Rose et al., 2022). Other important social preferences that are relevant in adolescence broadly and in the context of refugee youth specifically include trust. Trusting behaviour in adolescence, similar to prosocial behaviour, has been linked to developments in social perspective taking skills (Fett et al., 2014) (for a detailed review on the developmental aspects of social preferences along with their relevance for refugee youth research see the study on refugee youth preferences presented in chapter 4).

Another group of preferences relevant in adolescence are risk- taking and patience. As discussed previously, peers' opinions are an important resource for adolescents. In an effort to conform with popular opinions, adolescents are likely to base their choices and decisions on peers opinions (Berns et al., 2010). Furthermore, previous research suggests that parental preferences, risk-taking included, constitute an important indicator for their children's

preferences (Samek et al., 2021). As discussed earlier (section 1.3), adolescents demonstrate an ability to reflect on and consider the opinions of others which is a result of the social cognitive development underway at this stage. The positive influence of peers on adolescents' risk-taking behaviour has been discussed widely in the literature (Ciranka & van den Bos, 2019, 2021; Tynan et al., 2015). Furthermore, it can be argued that a certain degree of risk-taking is necessary during adolescence, as there may be potential social rewards associated with such behaviors (Blakemore & Mills, 2014). In other words, participants potentially take risks in order to receive peer group acceptance and avoid isolation, which are particularly valuable for adolescents. It could be argued that refugee youth take social risks in their new societies as they try to make connections with their peer group at school, accommodation centre and other social contexts they inhabit.

Finally, another aspect of risk-taking behaviour includes harmful behaviour. Clinical research suggests that a high exposure to traumatic events in refugee populations results in a higher prevalence of PTSD, with increased risk-taking and self-harm as a symptom (American Psychiatric Association, 2013) (mental health aspects elaborated in section 1.4). Impulsivity associated with adolescence's risk-taking is also linked to another important preference, namely patience (van den Bos et al., 2015) (a detailed review on refugee youth risk-taking and patience in chapter 4).

Taken together, adolescents benefit from resources in their social environment, they also contribute to their community via prosocial acts. Furthermore, while peers may exert pressure on adolescents to take risks, adolescents themselves also engage in risk-taking behaviors in pursuit of peer approval. Refugee youth represent an important group to consider in preferences studies due to not only their age group but also factors related to their immigration journey. Refugee youth preferences serve as significant indicators shaping their daily decisions, impacting crucial aspects such as their personal well-being, educational

trajectories, and broader societal factors like solidarity (Carlo & Padilla-Walker, 2020; Malti et al., 2021).

## 1.6 This dissertation

The overarching aim of this dissertation was to explore different aspects of Arabic-speaking refugee adolescents experiences living in Germany. Furthermore, this dissertation aimed to employ a strength-based approach, diverging from the conventional emphasis solely on the adversities experienced by refugee youth. Consequently, this study investigates the interplay of personal and environmental factors that shape the experiences of adversity and adaptation among refugee youth, encompassing aspects such as mental health, resilience, coping strategies, and preferences. Three research objectives will be identified and elaborated on in the following section.

### 1.6.1 Research aims

In response to the significant increase in the numbers of Arabic-speaking refugee youth in Germany during the 2015's "long summer of migration", there was a need for research investigating their experience in their new country of residence. Specifically, there was a demand for culturally sensitive research that explores different aspects of their experiences beyond a narrow focus on psychological pathology and the prevalence of mental health disorders. This gap in research motivated the first aim of this research project. **The first research aim** was to describe the main challenges Arabic-speaking refugee youth face in Germany and the coping resources they implement to address them. In addition, I aimed to employ a qualitative design and an ecological perspective to understand the developmental and acculturative aspects of the refugee youth experience.

The limited attention paid to resilience in existing studies on refugee youth mental health motivated the next aim of this dissertation. Specifically, **the second research aim** was

to utilise a socio-ecological resilience framework to examine factors influencing refugee youth resilience. Furthermore, I aimed to examine the associations between potentially traumatic exposure, resilience, and both depression and PTSD symptoms.

Finally, another important aspect receiving little attention in psychological research with refugee youth was preferences. Most findings on this topic draw on insights from the field of behavioural economics. As such, psychological research with sound mental health measures was necessary to examine refugee youth preferences. Specifically, there was a need to understand refugee youth preferences in relation to their mental health and traumatic exposure. This led to **the third research aim,** which explored the associations between potentially traumatic exposure, mental health outcomes (depression symptoms and PTSD symptoms), and refugee youth patience, risk-taking, and social preference (altruism, trust, positive and negative reciprocity).

### 1.6.2 Overview of empirical studies in connection to research aims

In order to achieve my research aims, I conducted three empirical studies, based on two types of datasets. The first dataset was qualitative based on semi-structured interviews with 20 refugee adolescents between the ages of 14 and 18, residing in two federal states Berlin and Brandenburg (Potsdam). I draw on the qualitative dataset to describe the main challenges Arabic-speaking refugee youth face in Germany and the coping resources they access to address them (chapter 2- addressing research aim 1).

The second dataset was quantitative, collected with 103 Arabic-speaking refugee participants in 14 schools in Berlin, age ranged between 14 and 19. This dataset was part of a bigger research project [for a quantitative study on acculturation and mental health with the same sample of youth, see (Meyer et al., 2023)]. I draw on the qualitative dataset to investigate two research aims. First, I examine factors influencing refugee youth resilience, in addition to associations between potentially traumatic exposure, resilience, and both depression and PTSD

symptoms (chapter 3 - addressing research aim 2). Next, I investigate the associations between potentially traumatic exposure, mental health outcomes (depression symptoms and PTSD symptoms), and refugee youth risk-taking, patience, and social preference (altruism, trust, positive and negative reciprocity) (chapter 4 – addressing research aim 3).

Next, I will provide a comprehensive overview of the empirical chapters included in this research study. These chapters delve into specific research aims and examine various aspects of refugee youth experiences, shedding light on their coping strategies, resilience, mental health, and preferences.

**Chapter 2** focuses on post-migration challenges and coping mechanisms of refugee youth. A qualitative research design is employed, utilizing semi-structured interviews with 14- to 18-year-old Arabic-speaking refugee participants in Berlin and Potsdam. The interviews are analyzed using thematic analysis, uncovering the main reported challenges faced by these youth, such as psychological wellbeing, education, friendship, accommodation, and experiences of discrimination. The chapter explores how participants cope with these challenges, highlighting the importance of social support from friends, family, and social services, as well as the utilization of their inner resources through strategies like avoidance, persistence, activity seeking, and active engagement.

**Chapter 3** takes an ecological perspective to investigate refugee youth resilience and its associations with socio-demographic variables, mental health symptoms, and potentially traumatic exposure. A cross-sectional dataset collected in schools in Berlin, comprising 14- to 19-year-old Arabic-speaking refugee participants, is analyzed. The findings reveal that the number of close friends emerges as the only socio-demographic variable significantly related to resilience. Furthermore, resilience is inversely related to both depression and post-traumatic stress disorder (PTSD) symptoms, highlighting its protective role in promoting mental well-being among refugee youth.

**Chapter 4** explores the associations between mental health (specifically, depression symptoms and PTSD symptoms), potentially traumatic exposure, and refugee youth preferences (risk, patience, and social preferences). Drawing on the same quantitative dataset as Chapter 3, the analysis uncovers a significant relation between PTSD symptoms and increased risk preferences. However, no significant relations are found for patience, altruism, trust, positive reciprocity, or negative reciprocity. These findings contribute to a deeper understanding of how mental health symptoms and traumatic experiences may influence certain preferences among refugee youth.

In summary, the empirical chapters of this dissertation offer valuable insights into the experiences of Arabic-speaking refugee youth, examining their adversity exposure, coping strategies, resilience, mental health, and preferences. By adopting various research methods and approaches, these chapters contribute to a comprehensive understanding of the multifaceted aspects of refugee youth experiences and provide a foundation for future research and interventions in supporting their well-being and successful adaptation.

### 1.6.3 Terminology

**Refugee**. The term "asylum seeker" and "refugee" represent legal organizational terms (Gowayed, 2022). The first term represents people who have applied for asylum and are either still waiting for a decision on their claim for protection, their application has not yet been processed, or they have not yet been granted refugee status. The second term refers to people who have been granted refugee status (Amnesty International, n.d.). These terms, or labels, serve as tools for countries of resettlement to manage their asylum systems. In addition, these labels have a direct impact on the lives of refugees including their access to different rights such as economical support, education, accommodation, and health services, amongst others (Bronstein & Montgomery, 2011a; Zetter, 2007). In this dissertation, I use the term refugees to refer broadly to both groups.

**Arabic-speakers**. Arabic is the official language of 25 countries in the region of Western Asia and North Africa[21], making it the 6th most spoken language in the world (Karnouk, 2023). This region boasts a wealth of geographic, economic, ethnic and linguistic diversity (Saab et al., 2022). Given the ethnic diversity in the region, it is inaccurate to refer to this population simply as "Arabs". It is also problematic to refer to this region as "the Arab world", which constitutes an erasure of the many other groups living in the region. Another problematic term is "the Middle East", in German *Nahe Osten,* due to its colonial and Eurocentric roots. To this end, throughout this dissertation I avoid using these terms whenever possible [22]. Instead, I used the term "Arabic-speakers" to refer to participants in this research project and geographic location to refer to the region.

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[21] In the empirical chapters, I implement either "the Eastern Mediterranean region" or "Western Asia and North Africa" depending on the region participants originate from.

[22] I include the term "Middle East" only in the keywords section in my empirical papers purely for visibility purposes.

# Chapter 2.  Challenges and Coping: Perspectives of Syrian and Iraqi Refugee Youth in Germany

*Note*. Electronic supplementary materials for this study are available on the journal website through the DOI link.

**Abstract**

Refugee youth constitute around a third of the refugee population in Germany. We studied the experiences of newly arrived Syrian and Iraqi refugee youth, aged 14 to 18 years (N=20), in Germany. We utilized semi-structured interviews and thematic analysis to investigate (a) the main challenges faced by youth and (b) their main coping resources to deal with these challenges. We grouped challenges into three levels: the individual level, the immediate social level, and the broader societal level. The most frequently mentioned challenges in our sample related to psychological wellbeing, school, friendship, accommodation, and discrimination. Youth reported relying on social support (friends, family, social services) and on themselves (through avoidance, persistence, activity seeking, active engagement) to cope with their challenges. Our findings provide insights into refugee youth's experiences in Germany, encompassing the acculturative, developmental, and generational aspects of their lives and demonstrating their coping and resilience. We discuss our results in relation to the literature on refugee youth in high income countries.

**Keywords:** Refugee Youth, Challenges, Coping, Germany, Middle East

## 2.1 Introduction

In the past decade, political turmoil and armed conflicts in the Eastern Mediterranean region have resulted in the largest refugee population in the world (UNHCR, 2018). As a consequence, many refugees have embarked upon the perilous journey to Europe (Ostrand, 2015; Sirin & Rogers-Sirin, 2015). In the summer of 2015, Germany temporarily suspended the Dublin Regulation[23] and subsequently witnessed the highest number of asylum applicants on record (Crul et al., 2017). According to recent figures, Germany currently hosts more than one million refugees and ranks fifth in the list of countries hosting refugees worldwide (UNHCR, 2020). Reports published by the German Federal Office for Migration and Refugees show that, in 2017 and 2018[24], 35% of asylum seekers were children and adolescents and a third of the refugee population in Germany came from Syria and Iraq (Bundesamt für Migration und Flüchtlinge, 2017, 2018). Refugee adolescents do not only have to navigate the challenges of adapting to their host country, they simultaneously face developmental tasks such as negotiating relationships with parents, friends, and forming their sense of self (Brough et al., 2003; Jugert & Titzmann, 2020).

**Challenges for refugee youth**

The challenges refugee youth face in their new country are often interrelated and nested in different contexts (AMSSA, 2016; APA Presidential Task Force on Immigration, 2012). Bronfenbrenner's ecological perspective provides a guiding framework to systemise these different contexts of the refugee youth experience and the main challenges they face in their new countries (Bronfenbrenner, 1977; Lustig, 2010; Suárez-Orozco et al., 2018). The current

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[23] The purpose of this Regulation, adopted in 2003, is to determine which State is responsible for processing an asylum application. Normally this is the State where the asylum seeker first entered the EU (UNHCR, n.d.).

[24] 2017 and 2018 are the years of data collection for this study.

study focuses on three levels of the ecological systems model, namely the individual level (e.g., mental health, acculturative stress), different domains of the microsystem (e.g., family, school, living conditions) and how they interact, and the macrosystem (e.g. societal factors). The exosystem and chronosystem were not investigated.

Research has established that exposure to war and adversities negatively impacts the psychological well-being and mental health of refugees. Reviews show that 19% to 54% of refugee youth and children living in Europe and North America exhibit PTSD (Post Traumatic Stress Disorder) and around 30% depression (Abou-Saleh & Christodoulou, 2016; Bronstein & Montgomery, 2011b; Fazel et al., 2012; Hassan et al., 2016; Henley & Robinson, 2011; Kirmayer et al., 2011; Lustig et al., 2004; Tam et al., 2017). In Germany, a recent study with asylum seeking minors from Afghanistan, Syria, and Eritrea found that 36.7% of accompanied minors scored above the clinical cut-off for Post-Traumatic Stress Symptoms (PTSS), 30% for depression, and 23.3% for anxiety, with even higher prevalence for unaccompanied minors (64.7% for PTSS, 42.6% for depression, 38.2% for anxiety; Müller, Büter, et al., 2019). These figures are considerably higher than those for German youth in general[25], of which 17.9% manifest depressive symptoms and less than 2% PTSD (Essau et al., 2000b, 2000a). A longitudinal analysis of mental health in young Middle Eastern refugees in Denmark showed that symptoms decreased over time, suggesting a role of length of stay in the new country (Montgomery, 2010).

In addition to potential challenges to their mental health, refugees often experience losing all that is familiar as they face new languages, values, and cultures that are distant from their own, when they arrive in their new country (d'Abreu et al., 2019; Kirmayer et al., 2011;

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[25] Comparing the prevalence of mental health disorders between newcomers and the general population might not be accurate. Groups of veterans and domestic violence survivors, for example, might provide a more informed comparison (Hameed et al., 2018).

Lustig et al., 2004; Papadopoulos, 2001). Intercultural contact often results in a process of cultural and psychological change, called "acculturation", and the outcomes of said process can determine newcomer youth's adaptation to their new life (Berry et al., 2006). In the context of migrant youth, the age at which an adolescent moves to a new country has been shown to determine whether they undergo an acculturative process (integrating one's home culture and the new culture) or an enculturating process (learning the norms of one's society; Titzmann & Lee, 2018). There are no studies, to our knowledge, on acculturation orientation in refugee adolescents, but a recent study on adult Syrian refugees in Germany showed that an affiliation with the culture of the new country promoted overall mental health (Green et al., 2019).

In the literature on the experiences of newcomer refugee youth, three domains of the microsystem are relevant to their wellbeing in their new countries, namely (1) education, (2) family, and (3) living conditions. Education was highlighted as a top priority for refugee youth in studies conducted in Australia and Germany (Gifford et al., 2009; Gruttner et al., 2018). Yet, only 23% of refugee children around the world are enrolled in secondary school, compared to 84% of the world's children (UNHCR, 2017). Even when refugee youth attend school, they face several difficulties. For example, a study in Canada found that, due to insufficient language skills, newcomer refugee youth were often placed in classes that failed to match with their academic level in their home country (Shakya et al., 2012). In a review on migrant youth in Germany, Frankenberg (2013) noted that migrants of all age groups succeeded less often in the German school system and were at least four times more likely to repeat a school year. Additionally, migrant youth were often streamed into schools that provided fewer years of schooling ("Hauptschule", "Realschule"), which negatively impacted future academic opportunities such as attending university (Frankenberg et al., 2013).

Family is an important aspect of the experience of refugee youth. Life in a new country can influence family roles and values (e.g., greater emphasis on autonomy, independence,

freedom) which often have the potential to positively or negatively impact adolescents' wellbeing (Anderson, 2001; Brough et al., 2003; Greenfield et al., 2003; Hassan et al., 2016). The family can be both a protective and a risk factor for refugee youth (Alami, 2020; McMichael et al., 2011). While communication, family cohesion and good parental mental health are considered protective factors (Fazel et al., 2012; Lustig, 2010), lack of trust between parents and their children, conflict in the family (between parents and their children and between parents), and domestic violence are considered risk factors (Hassan et al., 2016; McMichael et al., 2011). For unaccompanied refugee youth, separation from their family as well as difficult procedures of family reunification often result in psychological distress (Muller et al., 2019). Refugee youth also endure other disruptions of their social networks upon leaving their home country such as separation from friends and acquaintances (Kirmayer et al., 2011).

Third, living conditions in a new country, such as uncertainty regarding their legal status and socio-economic strains, shape young refugees' experience and adaptation to their new life (Alami, 2020; Anderson, 2001; Fazel et al., 2012). Additionally, housing represents a multifarious challenge for refugee youth. A longer stay in refugee accommodation centres, frequent relocation between accommodation centres, the inadequate conditions of refugee accommodation centres, and the difficulty of finding a private accommodation impact young refugees' psychological wellbeing (Anderson, 2001; Braun-Lewensohn & Al-Sayed, 2018; S. S. Nielsen et al., 2008).

On the broader societal level, factors such as political climate and public attitude can affect adolescents' overall sense of wellbeing (Frankenberg et al., 2013). In a recent large-scale panel study on discrimination in Germany, more than a third of participants, aged 14 and above, reported encountering discrimination based on factors such as their ethnic origin, gender, disability, religion or world view, age or sexual identity (Beigang et al., 2016). Exposure to

discrimination, both experienced and perceived, has been identified as a risk factor to the well-being of refugee youth in studies in Europe, North America, and Australia (Brough et al., 2003; Ellis et al., 2008, 2010; Fazel et al., 2012; Hassan et al., 2016; Montgomery & Foldspang, 2008; S. G. Patel et al., 2014; Shakya et al., 2010).  A study in Denmark found that middle Eastern refugee youth reported on average 1.8 experiences of discrimination since having arrived in the country up to three years before (Montgomery & Foldspang, 2008).

**Developmental tasks in the context of refugee youth**

In addition to acculturative challenges, refugee youth have to navigate adolescence-specific developmental tasks (Jugert & Titzmann, 2020). In adolescence the relationship with parents shifts as adolescents spend less time with parents, involve them less frequently in decisions and seek meaningful connections with their peers (Petersen, 1988). When discussing refugee adolescents and their relationship with their parents, it is imperative to recognise that autonomy (and its counterpart, relatedness) are valued differently across cultures (Greenfield et al., 2003; Kagitcibasi, 2005). In that regard, differences between parents' values and expectations and the values of the new country can cause tension for newcomer youth, and affect their relationship with their parents (Motti-Stefanidi & Masten, 2017). For example, parents may expect adolescents to choose friends that align with the values of their heritage culture; on the other hand, peers may expect newcomer adolescents to conform to the values of their culture. Ultimately, the way in which adolescents resolve these contrasting expectations informs their choice of close friends (Baolian Qin, 2009). Importantly, previous research suggests that refugee adolescents' resistance to conform to cultural expectations of their new country might increase the risk of being bullied by their peers, particularly in the school context (Schachner et al., 2018).

**Coping by refugee youth**

Despite the multitude of challenges faced by refugee youth, they often show remarkable resilience and coping (Henley & Robinson, 2011; Lustig et al., 2004; S. G. Patel et al., 2017; Ward, 2001). Coping can be defined as "constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (Lazarus & Folkman, 1984, p. 141). These demands can be met with two types of responses: (1) problem focused coping, which refers to behaviour aimed at changing features of the stressful environment, and (2) emotion based coping, which refers to changing one's perception and appraisal of stressful events (Lazarus & Folkman, 1984; Ward, 2001). Research has found that actively engaging with the challenges at hand and exerting effort to change stressful circumstances has a positive impact on adolescents' long term adjustment (Ebata & Moos, 1991). However, adolescents' general mental health can influence their coping response: the same study found that adolescents with depressive symptoms did not rely on active engagement and instead demonstrated more avoidance (Ebata & Moos, 1991). Moreover, the extent to which refugee adolescents are able to change aspects of their environment impacts their coping. For example, adolescents have varied levels of agency over stressors such as education and discrimination, which in turn leads them to adopt different coping strategies to deal with these stressors (Khawaja et al., 2008; Ward, 2001).

Only few studies have focused on coping amongst refugee youth. A qualitative study with newcomer refugee youth in Australia revealed that adolescents relied on social support from family, friends, and engaged in individual and community activities (Brough et al., 2003). Similar results were found for Somali refugee youth in the US (Goodman, 2004). A recent study by Muller and colleagues (2019) showed that newcomer refugee youth of multiple ethnic backgrounds in the US used both emotion focused coping and problem focused coping. Interestingly, the study also revealed that coping was stressor and situation specific, and that adolescents adapted their coping response to the situation at hand: When youth felt no agency

to resolve the stressor or perceived that it could be harmful to do so, they were more likely to rely on emotion focused coping (Muller et al., 2019).

**The current study**

Previous research has highlighted the importance of studying refugees' experiences in their new country, as those experiences can impact their well-being on the long-term (Montgomery, 2010). The German context is unique due to the high numbers of refugees from Syria and Iraq that have arrived since 2015. Yet, studies with refugee youth in Germany are still scarce and have mostly focused on mental health (Müller, Büter, et al., 2019; Müller, Gossmann, et al., 2019) and education (Crul et al., 2017; Frankenberg et al., 2013; Gruttner et al., 2018). To our knowledge, few studies have investigated refugee youth's own perspective on their new lives and challenges in Germany. Moreover, to overcome a purely deficits focused perspective on refugee youth  (Baker & McEnery, 2005; Keddie, 2012; Ryu & Tuvilla, 2018), our study also examined coping resources of refugee youth in Germany. This allowed us to address a significant gap in the current literature on coping by refugee youth in Germany and contributes to the literature on positive youth development (Chung et al., 2021). We conducted a qualitative interview study with Syrian and Iraqi refugee youth in Germany to address the following two research questions:

(1) What are the main challenges faced by refugee youth from Syria and Iraq?

(2) How do refugee youth cope with these challenges, and who supports them?

**2.2 Method**

**Participants**

Twenty participants (7 female, 13 male) between the ages of 14 and 18 years (M = 16.00, SD =1.72) took part in the study. Fourteen participants (70%; 5 female) were Syrian, and six were Iraqi (30%; 2 female). For further socio-demographic details, see Table 1. Participants had arrived in Germany on average 20 months (SD = 8.8 months, range = 1 to 33

months) before the interview took place. Sixteen participants had journeyed through the Balkan route to Germany and four arrived in Germany via plane with a family reunion visa.

We recruited 14 participants from Berlin and six from Potsdam. At the time of the study, Berlin had approximately 3.7 million inhabitants and nearly one-third (27.7%) of the population had a migration background (Amt für Statistik Berlin-Brandenburg, 2019; OECD, 2018). Potsdam, a city that borders Berlin on the west, had approximately 184,000 inhabitants, 11.9% of whom had a migration background (Amt für Statistik Berlin-Brandenburg, 2018; Bereich Statistik und Wahlen der Landeshauptstadt Potsdam, 2019).

We interviewed five additional participants but did not include them in the final data set because they differed substantially from the rest of the sample: Two were unaccompanied adolescents, one adolescent had a hearing and visual disability, one adolescent was married and had children, and one adolescent had insufficient Arabic language skills.

The study was approved by the ethics committee of the Faculty of Education and Psychology at Freie Universität Berlin (approval no. 157_2/2017). Data collection started in November 2017 and ended in July 2018. As a thank you for their participation, participants received an €8 shopping voucher from an electronics store.

**Recruitment**

We recruited adolescents using three different methods. First, we contacted accommodation centres in Berlin and received permission from two centres to recruit adolescents (n=11, 3 female). After gaining the approval of the management of these two refugee accommodation centres in Berlin, we contacted all Arabic speaking families living there with children aged 14 to 18 years and informed them about the study. The first author explained that the research aimed to understand the experience of young Arabic speaking refugee youth in Germany. Contacted parents raised no concerns regarding the study and every contacted family agreed to the participation of their teenage children. After parents had given

their informed consent for their teenage children to participate, we contacted adolescents and invited them to take part in the study. All adolescents gave informed consent before participating. All participants were interviewed in a quiet room in their accommodation centre. Importantly, we informed both accommodation centres and families that data collection was conducted solely for research purposes and would neither affect the funding for the accommodation centre nor influence the asylum application process of the families. We faced challenges while recruiting participants in accommodation centres as most of the contacted organizations never replied to us, refused to take part, or operated on yearly contracts and occasionally closed. Hence, we had to rely on two additional recruitment strategies to complete our sample.

Second, we contacted local initiatives that provided support to or organized activities for refugee adolescents and recruited participants in an activity centre (n = 6, 3 female). This centre offered free-time activities for adolescent refugees in Potsdam and allowed us to contact adolescents aged 14 years and older. We interviewed them in the accommodation centre where the free-time activities took place. Two participants lived in accommodation centres in Potsdam (one participant was living at the centre where the study took place) and four lived in private apartments in Potsdam. Adolescents gave informed consent before taking part in the study. We did not obtain parental consent for this group, as we did not contact them through their parents (note that adolescents aged 14 years and older do not require parental consent to participate in non-invasive, psychological studies in Germany).

Third, we used snowballing sampling (n=3, 1 female). We recruited these participants in Berlin through their friends who had already taken part in the study and recommended the study to them. All of them lived in private apartments and agreed to complete the interview in the nearby accommodation centre where their friends lived. Adolescents gave informed consent before taking part in the study; no parental consent was obtained.

**Table 1**

*Socio-demographic Details of Participants*

|                        | N  | %   |
|------------------------|----|-----|
| Country of origin      |    |     |
| Syria                  | 14 | 70% |
| Iraq                   | 6  | 30% |
|                        |    |     |
| Ethnicity              |    |     |
| Arab                   | 16 | 80% |
| Kurdish                | 2  | 10% |
| Izidi                  | 2  | 10% |
|                        |    |     |
| Religion               |    |     |
| Islam                  | 15 | 75% |
| Izidi                  | 2  | 10% |
| None                   | 3  | 15% |
|                        |    |     |
| School                 |    |     |
| Regular classes        | 13 | 65% |
| Welcome classes        | 7  | 35% |
|                        |    |     |
| Legal Status           |    |     |
| Asylum status          | 10 | 50% |
| Subsidiary protection  | 4  | 20% |
| Rejection              | 2  | 10% |
| Family reunion Visa    | 4  | 20% |
|                        |    |     |
| Accommodation type     |    |     |
| Refugee centre         | 13 | 65% |
| Private                | 7  | 35% |

**Procedure**

The first author, a Syrian counseling psychologist and a native Arabic speaker, conducted all interviews in Arabic. The first author piloted the interview procedure and script with adults and one refugee adolescent. Pilot interviews were videotaped, and the first author received feedback from the third author throughout the pilot phase.

The main interviews took place in a quiet room and all participants were interviewed individually. When meeting participants, the interviewer engaged them first in small talk to establish rapport and to ensure they felt comfortable. Only then would the interview begin:

participants received an explanation of the goal of the study and a description of the interview procedure. Next, the interviewer guided them through the informed consent form. For those who had difficulty reading in Arabic, she read the consent form out aloud. Participants also received a brief explanation of the field of psychology[26] and what a research study entailed. All contacted adolescents agreed to taking part in the study, signed a consent form and, in addition, the interviewer asked whether they agreed to be audio recorded. At that point, the interviewer switched the voice-recorder on.

The interview began with a series of socio-demographic questions asking participants about their age, gender, religious and ethnic affiliations, their journey to Germany, their school attendance in Germany, and their legal status in Germany (see Electronic Supplement for the full socio-demographic survey). The interviewer collected this information verbally for all participants and live-coded their responses.

The first question of the interview probed participants' daily routines in Germany, then the interviewer proceeded to asking participants about the biggest challenges they had faced since arriving to Germany, how they had dealt with each of these challenges, and who had helped them. After that she followed up with scripted questions probing for challenges in five domains of participants' lives in Germany (studying and school, accommodation, financial situation, health, their emotions since arriving in Germany), unless participants had already mentioned challenges in these domains in response to the previous question (biggest challenge). For each domain, the interviewer also inquired how they had dealt with each challenge and who helped them. Table 2 presents English translation of the complete list of interview questions (see Electronic Supplement for the interview script in Arabic).

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[26] Knowledge of the field of psychology and specific psychological terminology is not common in Syria and Iraq. Therefore, the interviewer explained that psychology is a field of science focused on the study of thoughts, feelings and behaviour and that some psychologists work in counselling and therapy, while others, such as the interviewer, work in research to increase our understanding of these phenomena.

During the interviews, the interviewer utilized her active listening skills to minimize influence on participants' responses, and to avoid reactions that might have condoned or condemned participants' answers. Interviews varied in the length, and while some participants responded in great detail, others gave brief answers. On average, the recorded section of the interview lasted 22 minutes, with a range of 16 to 39 minutes. The entire session (including warm-up, introduction to study and the recorded interview section) lasted approximately 30 mins to an hour.

**Table 2**

*English Translation of the Complete List of Interview Questions*

| Order | Question Text |
| --- | --- |
| 1 | Please describe your daily routine. |
| 2 | What are some challenges you face in your daily life? |
| 3 | What are the three most challenging situations you have faced since coming to Germany?[a] |
| 3.1 | How has your experience with **studying** and school been since you came to Germany?[b]<br>Do you have someone to study with/ help you with studying?<br>Do you understand the German educational system (e.g. how to plan your studies) |
| 3.2 | How has your **accommodation situation** been since you came to Germany?[b] |
| 3.3 | How has your **financial situation/money** been since you came to Germany?[b] |
| 3.4 | How has your **health** been since you came to Germany?[b] |
| 3.5 | How have your **emotions and feelings** been since you came to Germany?[b] |
| 4 | What is your impression of Germany? |
| 5 | What is your impression of Germans? |
| 6 | What are your wishes for the future |
| 7 | What are your plans for the future? |

[a] This question is followed up by questions 3.1 to 3.5
[b] For each challenge mentioned, the interviewer asked: How did you face this problem? Who helped you?

**Data coding**

An Egyptian native speaker of Arabic (not the first author) transcribed all interviews using F4transcript (Dresing et al., 2015). The first author then checked and proofread these transcripts. After that, the person who had transcribed the interviews translated them to English. To ensure accuracy, the first author checked the translated transcripts and compared them with the Arabic original. Discrepancies were corrected by the first author.

We analysed the interviews inductively using thematic content analysis (Braun & Clarke, 2006; Green et al., 2007; Pope et al., 2000). Specifically, the first author thoroughly read all the transcripts and then developed line by line in-vivo codes (Kuckartz, 2014) for a selection of eight representative interviews, taking into consideration gender, time since arrival to Germany, and accommodation type. In this step, she reduced each sentence of the transcript to keywords. The first and last author then grouped these keywords into comprehensive main categories and developed a coding guide (for more on this see Electronic Supplement). Next, the first author coded all 20 transcripts in F4Analyse (Dresing et al., 2015). To ensure that the main categories were coded reliably, we trained a second coder (none of the authors). She first coded three interviews that were not part of the main data set, received feedback and then independently scored all 20 transcripts. Next, we compared all statements coded by the first and second coder. If both coders assigned the same section of the transcript to the same category, we considered this a match. If only one coder scored a section, we considered this a mismatch. There were 73% matches (361 matches, 131 mismatches) between the first author and the second coder. Next, the two coders discussed all mismatches to arrive at a consensus coding (63% of the time, the decision sided with the first author's coding). Using the statements from the consensus coding, the first and last author identified sub-themes within the main categories and categorized the statements accordingly.

**2.3 Results**

We organised participants' statements into two main themes to answer our research questions about (1) the main challenges faced by refugee youth from Syria and Iraq, and (2) refugee youth's coping with these challenges. We used the ecological framework of Bronfenbrenner and Morris (1998) as a guide to systematize adolescents' challenges and investigated youth's coping inductively. The result section is structured to address these questions separately.

**What challenges do refugee youth in Germany face?**

We grouped participants' challenges into three main spheres (Bronfenbrenner & Morris, 1998): the individual, its immediate social level, and broader societal level (see Figure 1 for an illustration). At the individual level, participants reported challenges relating to their psychological wellbeing, physical health, and financial situation. At the immediate social level, participants faced challenges with family, friends, school, and accommodation. The broader societal level included experiences of discrimination, and challenges with a new lifestyle and, policies and bureaucracy in Germany. Table 3 illustrates the prevalence of these challenges amongst participants.

**Figure 1.** Main challenges reported by refugee adolescents in our study
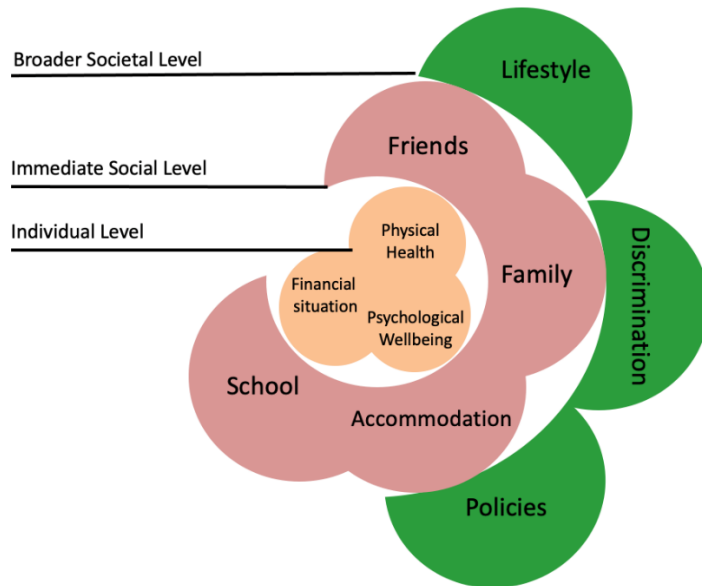
**Table 3**

*Prevalence of challenges amongst 20 participants ordered from most to least frequent within*

*each level.*

| Level | Theme | Frequency | Sample Responses |
|---|---|---|---|
| Individual Level | Psychological Wellbeing | 16 | "When I came here, it's like starting over, like just being born from the mother's womb and having the first day in life. Everything that we did is now gone and I have to start over which is difficult and I need time to figure things out." |
| | Physical Health | 8 | "I caught a disease in the accommodation centre with the mice, I don't know its name. My eyes turned red." |
| | Financial Situation | 4 | "It is hard for my father because my father [sends money] to my mother and my sister [back home]." |
| Immediate Social Level | School | 20 | "I like Mathematics, in Syria I was the best in class. [...] but I came to Germany and I feel restrained a lot because of the language. It's difficult and their educational style is different, everything is different, everything changed for me, the entire program changed." |
| | Accommodation | 16 | "In this sports hall we weren't sleeping well, because of the noise and people looking at you." |
| | Friends | 16 | "I think a lot of my friends in Iraq. I am comfortable here and they are there in a camp with cold and hot [weather] not like here. They are not well." |
| | Family | 12 | "It was very difficult for me to leave my mother and come here. This situation is very difficult, very difficult for me. [..] there is [no other difficulty], just this.." |
| Broader Societal Level | Discrimination | 15 | "They make fun of us because we are refugees." |
| | Bureaucracy & Policies | 6 | "I am afraid because of the residency. Anytime they can say "get out, we will deport you."" |
| | Lifestyle | 3 | "In Syria, talking about sex is unacceptable but here everything is acceptable, nothing is unacceptable." |

**Challenges at the individual level.**

*Psychological well-being.* When asked about their emotional and psychological state since arriving in Germany, 16 adolescents reported negative emotions. Most participants used generic descriptions such as "upset, tired, difficult, not good, bad" and only one participant, who was in therapy at the time of the interview, used the term "depressed".

Starting over in a new country and abandoning previous hopes and dreams negatively affected four participants' well-being as illustrated by the following statement:

> I want to have a job, a car and a family. These were my wishes when I was in Iraq, I was there for 15 or 16 years and now, I am here. I put those wishes on the side when I came here, it's like starting over, like just being born from the mother's womb and having the first day in life. Everything that we did is now gone and I have to start over which is difficult and I need time to figure things out (boy, 18).

The majority of participants, who reported negative emotions, did so in relation to experiences of discrimination and challenges regarding family, education, and friends. We clustered these challenges in separate categories, which we will further discuss in the following sections.

*Physical health.* In total, eight participants reported health issues they experienced in Germany. One boy (16) mentioned being sick upon arriving to Germany "because of the road, weather change" and the fact that "the weather in Syria is very different from Germany". Another boy (15) reported an eye infection, which he attributed to the insanitary conditions of his accommodation centre: "I caught a disease in the accommodation centre with the mice, I don't know its name. My eyes turned red".

*Financial situation.* Apart from four participants, the majority of adolescents did not report any financial challenges. One boy (15) struggled financially as his family was split between Germany and his home country: "It is hard for my father because my father [sends money] to my mother and my sister [back home]". Another participant (boy, 17) reported that "my financial situation […] was kind of bad but every day it is improving. It is [bad] because

we had a problem in Greece where someone defrauded us, but now every day the financial situation is improving." An older participant (boy, 18) compared his financial situation to that of his peers, saying that "I see a friend [...], he bought a car and I say why can't I be the same thing. This is the nature of life and I just wish they give us the space to work more and get a job."

**Challenges at the immediate social level.**

*School.* All participants attended school at the time of the interview and all of them reported some school-related difficulties. Fifteen participants perceived learning German, "speaking and grammar rules" and "coordinating all the rules together" (boy, 16) as a challenge. One participant stated:

> I find a lot of difficulty in the language because it's not your language. It doesn't matter how much you learn it you will not know it. So, one always faces difficulties and now I am almost done, and I will go to grade nine by God's Will (girl, 15).

The struggle to learn German occasionally caused conflicts with teachers, as illustrated by the following boy (17):

> I keep fighting with a teacher. I would read a whole text in German and pause over a word, and then she would say why you do not read fast. I tell her I was not born here in Germany, I am still new, and all of these words are new to me. She fights me, I fight her and so on.

Adolescents with insufficient German language skills usually first attended so-called "welcome classes" and once they had acquired sufficient language skills, they transferred to regular classes. This transition posed a challenge for the following girl (18):

> During Welcome Classes we only had German, German grammar rules, new words, etc. When I joined my school, I saw that they were also teaching math, English, physics, chemistry and they knew the words specifically about the subject. For example, what is a square, what is a triangle...etc.

These difficulties were mirrored by the following boy (15), who reported struggling with a school subject he previously excelled in, and attributed this to insufficient language skills and differences in teaching styles:

[...] The most difficult subject, I like Mathematics, in Syria I was the best in class. [...] but I came to Germany and I feel restrained a lot because of the language. It's difficult and their educational style is different, everything is different, everything changed for me, the entire program changed.

Some participants also worried that their proficiency in German would affect their career choices: "One must know the language very well before going to the 10th grade otherwise it will be very difficult. [...] if I get good grades, I will go to the 10th grade but if not then I am obligated to do Ausbildung [professional apprenticeship]" (girl, 18). Another participant (boy, 18) felt pressured to start working instead of continuing his education:

They [the Job Centre, social welfare centre] don't care, they only want you to do an *Ausbildung* [professional apprenticeship]. I wanted to do an *Abitur* [German high school diploma], then go to university, but they don't care. They just want you to finish school quickly and then pay taxes.

*Accommodation.* When they first arrived in Germany, most refugees lived in accommodation centres and living conditions could vary between centres. Many participants reported dissatisfaction with their assigned accommodation, which was highlighted in statements such as "my home is small […] studying is a problem for me at home" (boy, 18), "in this sports hall we weren't sleeping well, because of the noise and people looking at you" (girl, 15), "it was very dirty, even the food" (girl, 18). Some also reported that "there were problems in the hall and men fought, physically, and the police would come" (boy 15) and another shared that "there was a lot of thefts" (boy, 15).

Participants usually had to move at least once between different accommodation centres and one boy (15) described his experience graphically:

We move from centre to centre to centre, this is really bad. […] They brought us to [name of the area]. [Name of the accommodation centre] was really big but really bad, it had a lot of refugees from all countries, really bad. We stayed there for about 2 months then after [name of the accommodation centre] we went to that other centre that had mice and we stayed there for a year. Everyone there was disgusted by it, including my family, they were really upset.

Many participants wished to move to private accommodation but found that process challenging for various reasons "because we didn't get a residence permit" (boy, 17) or "One

can't move unless they work and I am young and I can't work, neither my sister nor my mother."

(girl,14)

*Friends.* Thirteen adolescents reported a multitude of challenges with friendships, as

this girl (18) aptly summarized:

> The first problem is loneliness; the loneliness I felt at the beginning was very difficult. Sometimes I still feel it. In Syria, we always had our neighbours around us and one knows everyone in the neighbourhood. For example, one can hang out with one's friends even if they are not close but here one finds it very difficult.

The main sub-themes that emerged in this category included the challenge of making

new friends in Germany and the challenge of sustaining already existing friendships back home

or in Germany. Eight participants reported difficulties in making new friends and the following

girl (18) reflected on the numerous reasons why this had been a challenge:

> I can't blend in with the other students [at school]. I don't know if it is the age difference between us or if it is the language or if it is because we come from different countries or if it is something else. So, I don't blend in that much with the students in my school. Sometimes I think it's the age difference, but I feel I can't even blend in with the Arab students in my school.
> Other participants mirrored these impressions, stating that "it is difficult to find

someone to hang out with if you don't speak the language" (girl, 15) or that "there is an age

difference between me and the others, they are 14 and I am 18, so I feel that my mind doesn't

match their minds" (girl, 18). These statements highlight the dual effects of lack of language

skills and of age differences due to interrupted schooling which created barriers to forming new

friendships. One girl (15) attributed her struggle in making friends to the differences in

friendship styles between her home country and Germany: "They [Germans] don't care for

having one close friend. I want a friend to stay with and continue to be my friend."

Sustaining existing friendships, in Germany or back home, was a challenge for six

participants. One boy (17) stated that "sometimes there are problems between my friends and

I, or a problem between my best friend and me". Differences between living conditions in

Germany and friends' living conditions back home burdened one girl (15) "I think a lot of my

friends in Iraq. I am comfortable here and they are there in a camp with cold and hot [weather] not like here. They are not well." (Girl, 15). Lack of opportunities for face-to-face interactions with friends back home affected the following boy's friendships (18) "[…] I don't like to stay in touch with people I don't see. […] I got busy and I didn't stay in contact with them. I came here and I am forced to start a new life here." Another challenge related to differences in political opinions, as the following girl (18) explained "I have some problems with my friends in Syria because of the current events".

*Family.* Overall, twelve participants reported numerous challenges with regards to their family life, which we grouped into two sub-themes: "changes in family life" and "lack of independent decision making".

Changes in family life affected a girl (17), who lived with both of her parents in Germany. She described how resettlement had strained her parents' marriage: "My parents fight sometimes, and this upsets me. Being in diaspora it becomes compulsory to fight." Eight adolescents struggled with separation from parents and siblings. For example, one girl (15) "feels something is missing" without her mother and another boy (15) stated that "there is one thing I think about a lot, my mother, I want her to come here. It was very difficult for me to leave my mother and come here". For some this was associated with the feeling that "there is nothing I can do" to change the situation (girl, 15). Two participants reported losing members of their nuclear or extended family in the war. One of those participants (girl, 18) stated that "This was really difficult, and I haven't forgotten until now, but life goes on and one must."

Perceived lack of independent decision making was reported by four participants, who wished to have more say over everyday life decisions. One boy (15) stated "I wish I could transfer to [the school] where my friend is. [...] my family, I will not start this conversation with them. They will tell me no". In addition, some of these four adolescents stated that their parents had made the life changing decision to move to Germany, and that they "didn't want

to come here in the first place but my mother made me" (girl, 18). This led one boy (15) to resent his father, saying that "I don't speak with my father because he separated us."

**Challenges at the broader societal level.**

*Discrimination.* Fifteen participants mentioned that "racism sometimes is a difficult thing" (girl, 15). Participants described different experiences of discrimination including ones that were based on factors other than race such as language or religion. It should be noted that participants commonly used the term [عنصرية] unsuriya "racism" when referring to discrimination. In the everyday Arabic language, the term "discrimination", [تمييز], tamiyiz, literally translates to "differentiation". However, it does not convey a sense of differential treatment based on colour of skin, religion, gender, sexual orientation, age, or socio-economic background. Participants described different types of discrimination, which we grouped into "obvious discrimination" and "ambiguous discrimination", respectively (S. G. Patel et al., 2014).

Obvious discrimination included experiences of being ridiculed, being called names, being asked to go back home, not to speak their mother tongue and being physically assaulted. Specifically, twelve participants described that they were called "Ausländer" (*foreigner*) or reported that "they say bad words to us" and "they make fun of us because we are refugees and came to them" (boy, 15). Others reported that they were told to" go back to your countries and leave Germany, go to your countries and don't stay here" (boy, 18) or that "you took everything from us" (boy, 18). For a girl (15), speaking her mother tongue in public provoked a discriminatory comment as a stranger told her "we are in Germany and we must speak German". One boy (14) shared a story of physical assault he experienced at school: "At the beginning when I was at school, I used to face some racism but not anymore. They used to call me refugee or foreigner. They assaulted me once […] physically".

We classified statements of four participants as ambiguous discrimination, in which participants reported that they felt discriminated against. However, we could not fully discern whether discriminatory intent was involved (i.e., no slurs or demeaning language were reported). For example, one girl (15) described her experiences with strangers and attributed their stares to her foreign appearance and language:

> It maybe shows that I am Arab so if there is a Nazi or someone similar, they stare at you like you should go back to your country. I faced something not nice from someone in the tram if you speak Arabic with someone you get stared at and given the look like "what are you talking about".

The following girl (15) reported that others' reactions to conversations about religion made her feel uncomfortable, stating that "if we speak about our religion Islam, they are surprised, or they joke about it. They pay too much attention to the religion when at the end we are all the same" (girl, 15).

***Bureaucracy and Policies.*** Six adolescents reported challenges in this category, "Because first you don't know all the regulations and you don't understand the language" (boy, 18). Some reported difficulties with paperwork such as inconsistent spelling of Arabic names in Roman letters[27], as the following girl (15) stated:

> My name is not like the name of my father. So, when I went to the Job Centre [social welfare office] the first thing, they would say is no. They would say I am not his daughter.

Other challenges with paperwork included renewal of documents, missing documents, or incomplete applications. In particular, applying for a residence permit and waiting for the outcome caused a lot of anxiety for participants as illustrated by the following statement:

> I am afraid because of the residency. Anytime they can say "get out, we will deport you" how can this happen, it can't happen. Residency is the most important thing. When the residency comes, one can feel that one settled a bit. My dad always talks on the phone about fellow refugees who cause problems. There are a lot of things happening and when these things happen, the situation worsens (boy, 15).

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[27] E.g. there are multiple ways to spell the first author's name (in Arabic لينا) in Roman Lina, Lena, and Leena.

According to participants, obtaining a residence permit played a crucial role as it determined whether they would be able to move to private accommodation or get a job. For example, a boy (18) stated that "I just wish they give us the space to work more and get a job. But they don't allow us to get a job."

Difficulties were not only reported with regards to obtaining documents and permits, but also with regards to securing school places. One boy (18) reported that "when I first came it took them 7 months to place me in a school".

***Adapting to German lifestyle.*** Three participants reported that they experienced challenges with "adjusting to living here with the Germans and in a European country" (girl, 15). One girl (18) elaborated on this topic, stating that "in Syria, talking about sex is unacceptable but here everything is acceptable, nothing is unacceptable" and explaining further:

> [...] many times I wish I can wear short dresses without thinking but when I do,
> I keep thinking about the fact that I am wearing a short dress. Even if it is hot
> and even though it is normal, I can't be comfortable.

**What coping responses do refugee youth show?**

During the interview, we asked participants how they had coped with each challenge they mentioned and who had helped them. We grouped participants' coping responses into two main categories: rely on social support and rely on self. We found that each participant mentioned these two main coping strategies during the interview. Across the sample both strategies were used to address the different challenges (with the exception of challenges relating to their financial situation), but to varying degrees (see Figure 2). In addition, four participants made faith-related statements that were grouped separately from the main categories.

**Figure 2**. Different coping resources used per challenge across 20 participants
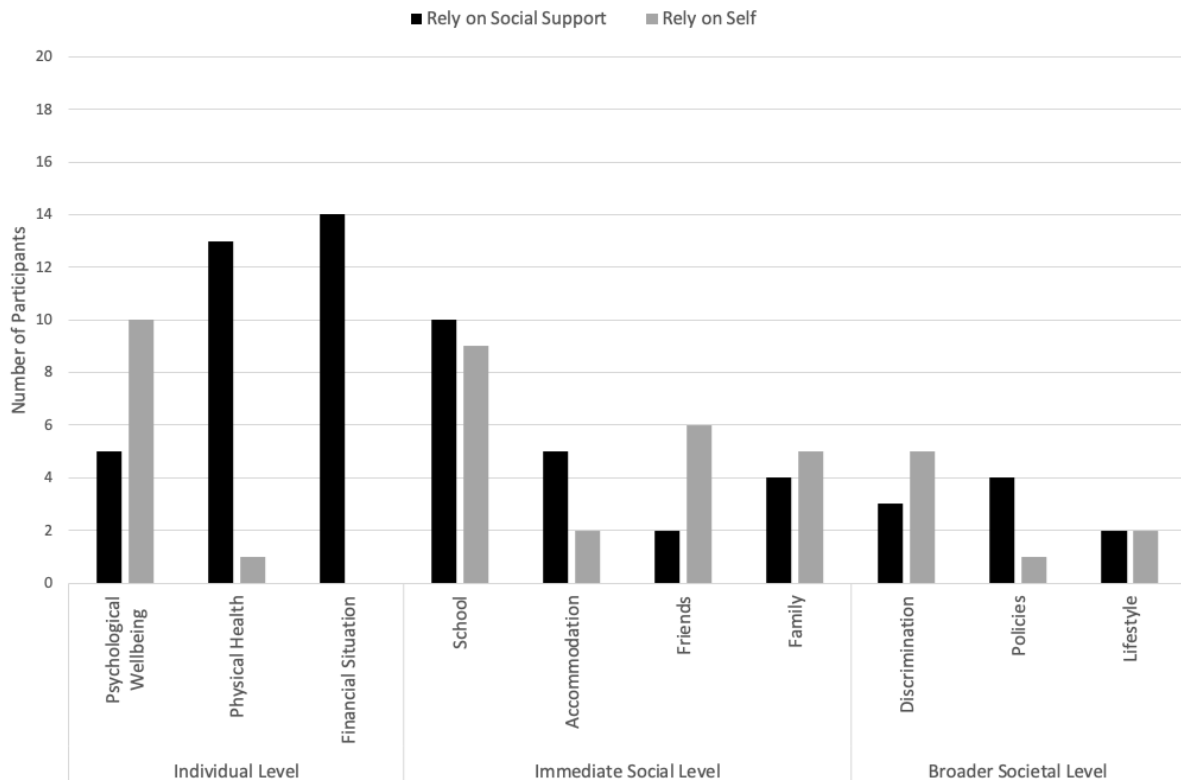
**Rely on social support.** All participants expressed relying on social support and referenced different sources of support such as "my family helps me and I help them" (boy, 15), "only my friend [helps me]" (girl, 16), "I know a teacher in another school, she helps me." (boy, 17), or" I go to a social worker here in the management [office in the accommodation centre] and ask her, I ask the security [guard[28]]" (boy, 15). Four participants reported relying on people from their community for support, this included "people in the accommodation centre" (boy,16), "the people who have been in Germany for a long time" (boy, 15; girl, 15), or the "Arab community" (boy, 18) more generally.

**Rely on self**. Seventeen participants also stated that they relied on themselves to mitigate the challenges of their new life in Germany. Some highlighted general self-reliance as in "I help myself" (boy, 15), while others elaborated more on the strategies they used. We

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[28] Most security guards working in refugee accommodation centres have a refugee or migration background themselves.

grouped these more specific strategies into avoidance, persistence, seeking distraction, active engagement, and cognitive appraisal (ordered from most frequent to least frequent).

Avoidance of (potentially) problematic situations or places was mentioned by eleven participants. For example, one boy (15) reported that "the team I played with was all Germans and they hated us, so I stopped playing." Another participant, a girl (16), mentioned removing her Hijab (Islamic headdress that covers a woman's hair) as a reaction to experiencing discrimination: "I was veiled at the time and they don't like veiled women and when this [being called bad names] happened to me I took it off."

When faced with an obstacle, nine participants demonstrated persistence and exerted continuous and conscious effort to overcome it, as illustrated in the statement of this girl (15):

> […] I try to push myself at home so I can achieve what I want. I get home I translate everything that I didn't understand. If there is a lesson that I didn't understand I research it online and sometimes I use Google.

Seven adolescents reported engaging in activities to distract themselves from the challenges they faced. For example, one boy (18) stated "when I have a problem, I search for something to keep me busy until the time has passed," and a girl (18) reported that "I try to sleep or go out a bit. Sometimes I walk with music." Others distracted themselves with their mobile phones as illustrated by the following quote "I stay by myself and watch stuff on the phone" (boy, 15). The following girl (18) demonstrated resourcefulness in dealing with loneliness at school:

> Well, I keep attending [school] but I don't do anything. Sometimes I try to speak to someone next to me or I try to forget about it, I try to breathe slowly, I try to draw if it's a drawing related subject or I try to listen to music if it's allowed because sometimes, they don't allow us.

Five adolescents reported active engagement with the challenges at hand and tried to resolve problematic situations. For example, a boy (15) addressed a problem at school and stated that "if we can resolve it, between me and the person, then we do so." A girl (15) reported

standing up for herself when harassed in the tram for not speaking German: "I told her that it's not her business to tell us what we do since we are on the street not at school".

To cope with a challenge, three participants reported changing (or attempting to change) their mindset. The following girl (15) relied on optimism and hope of a better future, reporting that "I convince myself that what is yet to come is better, just like that I try to overcome my feelings". Another participant (boy, 15) exercised self-control when experiencing discrimination:

> I was going to hit him but there are rules here and hitting is not allowed. I controlled myself and didn't hit him, and then it became normal.

Lastly, a girl (18) struggled with her new life in Germany and reflected on her experience as follows:

> I am still lost. But sometimes I tell myself I came here, and I have to adjust and sometimes I tell myself I have to keep my customs that I was raised with. Yet sometimes I see that here is right and there is wrong. Sometimes I see that there is right and here is wrong.

**Rely on faith.** In some cases, participants used the following terms Thank God " الحمد لله" and God willing "انشاالله". These are very common expressions in the everyday Arabic language, and they do not necessarily have a religious connotation. Although they originate from religious Islamic culture, they could be used by both religious and not religious individuals. In the statements of four adolescents, we noticed that when using these expressions, they did not emphasize an exclusive reliance on God nor did they mention them along with engagement in religious activities (i.e., prayer, recital of Holy Scriptures). Rather, they seemed to convey hope that things will be better in the future as illustrated by the following statements by different boys (15) "inshallah I will have money", "I don't know, I ask God that the nationality [German citizenship] comes quickly", or "[my dad] tells me by God's will, we will bring [the mother] in one or two months and I say by God's will in less than one months".

**2.4 Discussion**

Our study investigated the challenges for Syrian and Iraqi refugee youth in Germany and their main coping resources. We prioritized youths' own perspectives (Ryu & Tuvilla, 2018) and used semi-structured interviews and thematic analysis, informed by similar studies with refugee youth in Australia (Brough et al., 2003; Gifford et al., 2009) and immigrant youth in Malaysia (Arbabi et al., 2016). We organized participants' accounts of their challenges into three levels (individual level, immediate social level, and broader societal level) drawing on Ecological Systems Theory (Bronfenbrenner & Morris, 1998). We inductively grouped coping responses into two main categories: rely on self and rely on social support. Next, we discuss our main findings from the challenges and coping analyses.

**Challenges for refugee youth in Germany**

On the individual level, refugee youth's mental health challenges were at center stage. Adolescents discussed experiencing stress due to starting a new life in Germany, homesickness, alongside challenges with family separation and making new friends. When referring to their feelings, youth often used words such as "sad", "bad", or "not good." Only one girl mentioned experiencing depression and attending psychotherapy. A review on the mental health of Syrian adults affected by armed conflict (Hassan et al., 2015) found that they tended to use vague and colloquial terms to describe psychological symptoms and placed a stronger emphasis on psychosomatic symptoms. Participants in our study did not mention mental health challenges relating to war exposure or difficult flight experiences. It should be noted that the interview centered on youth's life in Germany and did not explicitly probe their war or flight experiences. Given that we did not conduct a clinical interview, we could not determine whether youth had in fact experienced traumatic events and/or suffered from mental health disorders. Moreover, the interview was conducted by an unfamiliar adult and adolescents may not have wanted to share some of their experiences in this context.

On the individual level, youth also mentioned financial strains, in line with previous reviews (Alami, 2020; Fazel et al., 2012). Adolescents witnessed their parents' financial difficulties who, for example, had to send money to family back home. Adolescents also compared their living standards to those of their peers and were aware of differences in financial resources. Such social comparisons are particularly salient for adolescents given the significance of peers and peer influence in this developmental period (Zarrett & Eccles, 2006).

On the immediate social level, and in line with previous findings from refugee youth in Australia (Gifford et al., 2009), school and education were highly significant topics for refugee youth. Learning German occupied a central place for youth as it affected not only their placement in school classes, relationship with teachers, and academic performance, but also had potential downstream effects on further educational (e.g., continuing into higher education) and vocational opportunities. A German study on access to higher education highlighted that education is perceived by refugee students not only as a means out of poverty and marginalization in their new country, but also as a means to support their families both in the new country and their home country (Gruttner et al., 2018). The study's authors assert the need for professional counselling and high-quality language courses to support refugee youth on their way to higher education or professional apprenticeship programs.

Adolescence is a period in which meaningful bonds with friends and autonomy from family become increasingly important (Greenfield et al., 2003; Lerner & Galambos, 1998; Zarrett & Eccles, 2006). Our participants struggled with making new friends and they attributed this to differences in age, language and culture. Similar results were reported by a study with refugee adolescent girls in Sweden (Bergnehr et al., 2020) and refugee youth in Australia. (Riggs & Due, 2010). They also struggled with maintaining friendships back home owing to political differences amongst friends, geographical distance, slim chances of reunion, and different living conditions. Concerns regarding friendships were more frequently reported in

our sample than challenges with immediate family, which highlights the importance of friends for adolescents in our study. It should be noted, however, that the majority of youth in our study lived with both parents and that those who were separated from immediate family members experienced this separation as stressful. Participants' living conditions, accommodation, was also reported as stressful and dissatisfactory due to a lack of a quiet space to study, and a private place to be on their own. Similar challenges with accommodation centres were reported in a survey study of Arabic speaking refugees in Germany (Georgiadou et al., 2017).

On the broader societal level, participants reported experiencing discriminatory interactions, in the form of verbal and physical abuse, which they attributed to their looks or refugee status. Exposure to discrimination has been documented as a common and taxing experience that negatively impacts refugee youth adaptation (Australia; Buchanan et al., 2018). Additionally, refugees living in shared accommodation reported experiencing more discrimination than those living in private accommodation (Brücker et al., 2016; Gurer, 2019). A large survey study in Germany found that around a third of those surveyed favored immediate deportation of unaccompanied refugee youth and less than a quarter thought that Germany could host more unaccompanied youth (Plener et al., 2017). Germany is not yet considered a multicultural society based on diversity and policy indexes (Hanke et al., 2017), and a preference towards cultural homogeneity and a perception of foreigners as threat, rather than an enrichment, could explain negative attitudes in parts of the population. Importantly, at the same time a striking rise of volunteer movements has been recorded across different age groups, municipalities, cities and towns in Germany. Volunteers and "welcome initiatives" not only filled the gap in providing services for asylum seekers but also created safe spaces for them in their neighborhoods and countered right-wing movements (Hamann & Karakayali, 2016).

Youth in our study also mentioned challenges with regards to their legal status and, in particular, referred to the uncertainty of obtaining a residency permit. In Germany, the country of origin of an asylum seeker affects the time it takes to process the asylum application and may lead to different pathways for obtaining residency permits. Syrians have a much higher chance of getting asylum status than Iraqis (Pro Asyl, 2019). Within our sample, two Iraqi participants had their asylum application rejected and were in the process of appealing that decision, which took a toll on their overall wellbeing. This is in line with recent findings showing a relationship between legal status and mental health of asylum seeking children and adolescents in Germany (Müller, Büter, et al., 2019; Müller, Gossmann, et al., 2019).

Taken together, our findings provide valuable insights into refugee adolescents' lives in a high-income country such as Germany. First, these challenges mirror two interrelated aspects of refugee youth's experiences, namely their experiences as refugees (e.g., losing contact with significant social networks at home, learning a new language) and their experiences as adolescents (e.g., importance of friendships). There is a lack of empirical studies examining refugee youth development in the context of cultural transition although the significance of such integration has been highlighted in recent review articles (Juang et al., 2018; Lustig, 2010; Ward & Szabó, 2019). Second, education was a frequently reported challenge by adolescents in our study and one with a large impact on the future aspirations of refugee youth in their new countries. Educational challenges, combined with low income, inadequate living conditions, uncertainty about their legal status, and an exposure to discrimination all affected the quality of life and wellbeing of young refugees. Future work could investigate how these challenges develop over time and whether they are resolved after a prolonged stay in Germany.

**Coping responses by refugee youth**

In our analysis of participants' coping statements, we grouped their strategies as "rely on self" and "rely on others" as we were primarily interested in who they relied on for support (see also the wording of our question "who helped you with this challenge?"). Our participants accessed both social networks and inner resources (avoidance, persistence, activity seeking, active engagement) to deal with the different challenges they faced, with the exception of economic challenges as family support was the only coping resource mentioned there.

Examining cultural variation in coping preferences is important to understanding coping in context (Ward & Szabó, 2019), and, to our knowledge, there are no previous studies on coping by refugee youth from the Eastern Mediterranean region in a high income country like Germany. There are parallels between our findings and those of Muller and colleagues (2019) who found that migrant adolescents in the US used emotion focused coping strategies and problem focused coping strategies. In our sample, emotion-based strategies included avoidance of and seeking distractions from a challenging situation or accessing social support as a source of comfort. Our participants also showed problem focused coping by actively attempting to resolve their challenges or by accessing social support to access relevant information and to better understand a problem.

Previous findings on refugee youth wellbeing emphasized the role of religion as a protective factor and a coping resource (Alami, 2020; Fazel et al., 2012). In our study, some participants mentioned God in a vague colloquial term "inshallah" which translates to "God's willing" but did not report resorting to religious practices for dealing with the challenges in their new lives. A recent survey in ten Arabic speaking countries found a decrease in youth's religiosity (Arab Barometer, 2019), which might explain our findings. Similar decline in interest in and practice of religion was also found in German youth, although Muslim youth in Germany were in general more religious than catholic or protestant youth (Albert et al., 2019).

Our participants referred to online resources such as Google and YouTube for help with their studies. In addition, they reported using their phones for distraction or for keeping themselves occupied. These accounts reflect a common characteristic of their generation which has a constant online presence through platforms such as YouTube, Instagram and Snapchat amongst others (Parker & Igielnik, 2020). Recent studies showed that Syrian refugee youth in Canada used social media for community support (Veronis et al., 2018) and that refugee youth used the internet as a resource for education during their flight journey (Lucić & Liharska, 2019).

**Study limitations and future directions**

Our results apply to the specific context of Syrian and Iraqi refugee youth living in a high-income country and our findings may not generalise beyond the characteristics of our study sample and the context of our study. Our sample of 20 adolescents could be considered relatively small. Past qualitative research with refugee youth and adults has reported sample sizes ranging from 24 to 67 participants (Baolian Qin, 2009; Gurer, 2019; Muller et al., 2019). However, it is important to highlight that many of these studies included a wide range of countries of origin (e.g., Brough et al., 2003; Gurer, 2019; Muller et al., 2019), whereas our sample consisted of adolescents from "only" two countries of origin. Moreover, we had initially planned to focus on participants from Berlin but experienced difficulties in recruiting sufficient numbers of participants and consequently expanded our recruiting efforts to the neighbouring city of Potsdam. It is worth mentioning that Berlin, the capital of Germany, is larger and more culturally and ethnically diverse than Potsdam. The two cities could therefore provide different experiences for newcomer refugee youth. Furthermore, it is unclear how the experiences of refugee youth in our study would relate to experiences of those settling in other parts of Germany (e.g., more rural parts). Future research could investigate the impact of location of residence in more detail.

Our interviews varied in length between participants and, although all participants answered all of the interview questions, some of them went into more detail than others. It is possible that participants' young age and unfamiliarity with a one-to-one interview setting might have had an effect on the interview length. A longer, more in-depth interview might have provided more nuanced insights into youth's experiences but may have necessitated a smaller sample size due to added transcription and coding workload. Generally, sharing details about interview-length, though uncommon in previous studies, provides transparency about the method and can inform future researchers' data collection plan and analysis method.

Our study offers a snapshot in time of refugee youth's experiences in Germany but did not follow up for a second (or third) interview. Longitudinal studies can address questions such as how post-migration challenges change over time (Chung et al., 2021) and whether said challenges correspond with main developmental tasks. For example, adolescents may perceive making friends as a main challenge, but as young adults they might be more concerned about accessing the job market. Future research could examine the role of length of stay on refugee youth's experiences and further help to inform future interventions and services supporting refugee youth.

**Conclusion**

Results from the current study highlight education, psychological wellbeing, friendship, accommodation and discrimination as major challenges for Syrian and Iraqi refugee youth in Germany. Refugee youth in our study demonstrated nuanced coping as they relied on social networks and themselves (including avoidance, persistence, activity seeking, active engagement) to mitigate the challenges of their new life. Overall, our study indicates that educational settings could be fruitful targets for programs aiming to support refugee youth and to improve their well-being. Schools could also serve as places to actively engage refugee and non-refugee students in programs aimed at understanding their diverse experiences and

countering discriminatory behavior (e.g., Juang et al., 2020). Such programs could provide space for refugee youth to create their own narratives by emphasizing their strengths and unique experiences, challenging the deficit view of refugee youth (Ryu & Tuvilla, 2018).  This could help in  promoting a shift from focusing on challenges and risks towards acknowledging (refugee and non-refugee) students' capacities and strengths (Riggs & Due, 2010).

Recent reports forecast increases in migration in the coming decades due to the climate emergency (Xu et al., 2020) and economic and political instabilities (Hodal, 2019). Migration and subsequent acculturative challenges may hence become a common experience for many youth world-wide. Results from our study may help to better understand the experience of youth migrating to high income countries such as Germany and support their adaptation and wellbeing.

**Chapter 3.   Resilience, Mental Health, and Potentially Traumatic Exposure of Arabic**

**Speaking Refugee Youth in Germany**

This chapter is based on: Alhaddad, L., Stammel, N., Knaevelsrud, C. & Kanngiesser, P. (2023). A longitudinal examination of Resilience, Mental Health, and Trauma Exposure of Arabic Speaking Refugee Youth in Germany. Manuscript submitted for publication.

*Note*. Electronic supplementary materials for this study are available through this link: https://osf.io/bjdhx/?view_only=8d5029e9d1d242f985299b43f5021468

**Abstract**

Refugee youth often exhibit impressive resilience in the face of challenging and potentially traumatic circumstances. In this study, we conceptualized resilience as an ecological construct, and investigated its interplay with sociodemographic factors and mental health outcomes in Arabic-speaking refugee youth ($M_{age}$=15.9, $SD_{age}$=1.3) in Berlin, Germany (data collected 2018-2019). Cross-sectional analysis ($N$=103, 54 female) revealed a significant positive association between resilience (CYRM-12 scale) and number of close friends. Furthermore, higher resilience scores were associated with fewer depression and PTSD symptoms. Finally, experience of potentially traumatic events was associated with PTSD symptoms, but not with depression symptoms. These findings have important implications for developing interventions to promote resilience and support mental health of refugee youth.

**Keywords**: Refugee youth, resilience, mental health, trauma, Middle East, Syria, Germany

**3.1 Introduction**

Since political turmoil and conflict has surged in the Eastern Mediterranean region in the last two decades, Germany has been receiving large numbers of Arabic-speaking refugees, with the biggest two groups originating from Syria and Iraq (Bundeszentrale für politische Bildung, 2023). Refugee youth constitute almost a third of the refugee population in Germany (BAMF, 2023). Refugees living in high-income countries such as Germany have often survived war in their home countries, faced adversity on their flight journey, and may continue to encounter challenging situations in their new country of residence (Walther, Rayes, et al., 2021). These conditions frequently result in higher prevalence of mental health disorders in young refugee populations compared to their peers in their new country (Sleijpen et al., 2019). According to a systemic review on mental health of young refugees residing in European countries, the prevalence of post-traumatic stress disorder ranged between 19% and 52.7%, while depression was found to range between 10.3% and 32.8% (Kien et al., 2019). In a study with refugee youth in Germany, more than half showed symptoms of post-traumatic stress symptoms, PTSS, and more than a third presented depression symptoms (Müller, Büter, et al., 2019). Psychological disorders have been found to be stable from early to late adolescence in refugee samples (Rousseau & Drapeau, 2003). Importantly, the psychological distress that refugee youth often manifest reflects a "normal response to their abnormal context" (Feyissa et al., 2022, p. 3).

Research shows that when faced with challenging and adverse conditions, many refugee youth respond by tapping into personal and social resources (Alhaddad, Goodwin, et al., 2021; Panter-Brick et al., 2017). This response has often been termed resilience, however, there are some discrepancies in how resilience is defined in the literature and measured empirically. Some researchers define resilience as a personal trait, the absence of which results in mental health disorders (Sleijpen et al., 2013). According to this view, resilience enables

people to bounce back from adverse situations to their initial state before experiencing adversity (Sleijpen et al., 2013). However, there may be contexts where people cannot simply bounce back. This is particularly relevant for people living in challenging financial conditions, along with refugees and survivors of catastrophes whose lands and countries have been changed forever (Manyena et al., 2011; Walsh, 2002). Moreover, conceptualizing resilience as an individual trait does not account for resources that exist beyond the individual, yet contribute to their overall resilience such as community and social resources (Sleijpen et al., 2019; Walther, Amann, et al., 2021). Ecological approaches view resilience as developing throughout an individual's life via interactions with their environment (Ungar, 2008). We adopt such an approach in the current study and use a definition of resilience as processes that "occur at multiple systemic levels, with individual, relational, community and cultural factors interacting to produce positive developmental outcomes among populations facing significant adversity" (Liebenberg et al., 2013, p. 6).

Previous studies show that refugee youth experience adversity on average at higher rates than their local peers (Sleijpen et al., 2019). These potentially traumatic experiences relate to the higher prevalence of mental health disorders in young refugees (Sleijpen et al., 2019). It is crucial to highlight that traumatic exposure does not necessarily impair refugees' psychosocial wellbeing, and it has been argued that resilience could explain this discrepancy (Rousseau & Drapeau, 2003). However, the association between potentially traumatic exposure and mental health disorders has been scarcely examined in the context of refugee youth. In a longitudinal study with Middle Eastern refugee youth in Denmark, Montgomery and colleagues (2010) found that the type and number of traumatic events correlated negatively with resilience. In this study, however, resilience was operationalized as the recovery from mental health disorders and was not measured as an independent construct. A cross-sectional study with refugee adolescents living in Australia reported that refugee adolescents presenting

depression symptoms had lower levels of resilience but found no relation between traumatic exposure and resilience scores (Ziaian et al., 2012). Similarly, Sleijpen and colleagues (2019) observed that trauma exposure was not associated with resilience in a cross-sectional study with refugee youth in the Netherlands and that resilience did not moderate the effect of pre-migration traumatic experiences on PTSD symptoms. Finally, a study with Syrian refugee youth resettled in Jordan (a middle-income country) found that mental health symptoms were negatively related to resilience scores, but again observed no influence of traumatic exposure on resilience scores (Panter-Brick et al., 2017).

In addition to mental health and traumatic exposure, previous resilience research has investigated the impact of individual level factors such as age and gender on resilience and yielded mixed findings. While one meta-analysis found no effect for age or gender on resilience (Lee et al., 2013), another showed that resilience increased with age and that age and gender, respectively, moderated the relation between resilience and mental health symptoms (Hu et al., 2015). In the refugee context, a study with refugee adolescents in Australia reported no significant correlation between age and resilience, but found higher resilience scores in female participants (Ziaian et al., 2012). However, a study with adult refugees in South Korea observed no relation between gender and resilience (Feyissa et al., 2022).

Another aspect that may be relevant when researching refugee's resilience is their socio-economic status. Previous research suggests that refugees with low socio-economic status and those living with uncertain legal status are a particularly vulnerable group (Bernhard et al., 2007; Fazel et al., 2012). For example, socio-economic status post migration was related to lower resilience in adult refugees in South Korea (Feyissa et al., 2022) and insecure asylum status was associated with negative mental health outcomes and lower resilience in refugee youth in the Netherlands (Sleijpen et al., 2017).

Finally, researchers have emphasized the significance of relational aspects of resilience (Ungar et al., 2013). Resilience has been described to "rest fundamentally in relationships" (Montgomery, 2010, p. 479), and, for refugee youth, these vital relationships include their families, peers, and communities (Montgomery, 2010). In a study with migrant and refugee youth in Canada, resilience was found to mediate between social connectedness and wellbeing (Khawaja et al., 2017). Additionally, living with family members acted as a buffer for young refugees, and family support and family cohesion have been identified as protective factors (Montgomery, 2010; Pieloch et al., 2016). Furthermore, peers with a similar cultural heritage and local peers with mainstream culture affiliation have been shown to play a significant role for young refugees' resilience (Block et al., 2017; Pieloch et al., 2016; Sleijpen et al., 2016).

To capture resilience as an ecological construct, researchers developed and validated the Child and Youth Resilience Measure (CYRM-28; Ungar & Liebenberg, 2011) and the shorter version CYRM-12 (Liebenberg et al., 2013). Based on research in 11 different cultural contexts including high-, middle-, and low-income countries and in cooperation with youth (Christmas & Khanlou, 2019), this is one of the most widely used scales in the field (A. S. Masten et al., 2021). To our knowledge, however, no previous study used the CYRM to examine the interplay between mental health outcomes and resilience in a refugee youth sample in a high-income country like Germany.

**Current Study**

Using an ecological conceptualization and measure of resilience (CYRM-12; Liebenberg et al., 2013), this study focused on 14-19 year-old Arabic-speaking refugee youth in Berlin, Germany, and had two main aims. First, we investigated the interplay between resilience and sociodemographic factors using cross-sectional data. Second, we examined associations (cross-sectionally) between resilience, potentially traumatic exposure, and mental health outcomes (i.e., depression symptoms and PTSD symptoms).

For the first aim, we included age, gender, legal status, flight itinerary, accompanied status, number of close friends, and number of German friends as co-variates. Specifically, based on previous findings on the protective role of family and friends on youth resilience (Montgomery, 2010; Pieloch et al., 2016; Ungar et al., 2013), we expected participants living with their families and those who had more close friends in general and more friends originating from Germany to score higher on the resilience scale. Previous research has suggested that refugees arriving in Western Europe via the Balkan route and refugees living with insecure legal status constitute a particularly vulnerable group (Arsenijević et al., 2017; Müller, Gossmann, et al., 2019). However, due to the lack of previous data on legal status and flight itinerary in the context of resilience, it is unclear how these factors would be associated with resilience. Furthermore, due to inconsistent findings about associations between resilience and age and gender, respectively, (Hu et al., 2015; J. H. Lee et al., 2013; Ziaian et al., 2012), we made no assumptions about how these factors would relate. For the second aim, we analyzed associations between depression symptoms, PTSD symptoms, potentially traumatic exposure, resilience, age, and gender. We expected that higher resilience score would relate to lower symptoms scores of PTSD and depression, respectively (Hjemdal et al., 2011; Hu et al., 2015; J. H. Lee et al., 2013).

**3.2 Method**

**Participants**

Arabic-speaking refugee adolescents 14- to 19-year old ($M_{age}$=15.9, $SD_{age}$=1.3) living in Berlin, Germany, took part in our study. Berlin is the capital of Germany and the center of the Berlin-Brandenburg region with 5.8 million residents from 180 different countries (*Berlin Population*, 2023). Close to 40% of the city's population consists of foreigners and Germans with a history of migration (Amt für Statistik Berlin-Brandenburg, 2019). The sample of the current study consisted of 103 refugee adolescent participants (54 female). Seven additional participants opted to withdraw during the data collection session. After the completion of data

collection, we found that two other participants were under the age of 14 based on their stated month and year of birth. Since we were unable to independently verify their ages, we decided to exclude them from the data analyses. In Germany, the legal age of consent is 14 and younger participants would have needed parental consent to take part in research studies. For an overview of sample characteristics, see Table 1.

**Table 1**

*Characteristics of the sample*

|  | n | % |
|---|---|---|
| <u>Gender</u> | | |
| Female | 54 | 52.4 |
| Male | 49 | 47.6 |
| <u>Country of origin</u> | | |
| Syria | 77 | 74.8 |
| Iraq | 11 | 10.7 |
| Palestine | 7 | 6.8 |
| Lebanon | 3 | 2.9 |
| Bahrain | 2 | 1.9 |
| Egypt | 1 | 1 |
| Libya | 1 | 1 |
| Kuwait | 1 | 1 |
| <u>Ethnicity</u> | | |
| Arab | 84 | 81.6 |
| Kurdish | 12 | 11.7 |
| Yazidi | 3 | 2.9 |
| Copti | 1 | 1 |
| Other | 3 | 2.9 |
| <u>Religion</u> | | |
| Islam | 98 | 95.1 |
| Izidi | 3 | 2.9 |
| Christianity | 1 | 1 |
| No religion | 1 | 1 |
| <u>Itinerary</u> | | |
| via Land/other countries | 56 | 54.4 |
| via Plane | 47 | 45.6 |
| <u>Arrival in Germany</u> | | |
| Accompanied | 97 | 94.2 |
| Unaccompanied | 6 | 5.8 |
| <u>School</u> | | |
| Regular classes | 68 | 66 |
| Welcome classes | 35 | 34 |
| <u>Legal Status</u> | | |
| Asylum status | 39 | 37.9 |
| Subsidiary protection | 21 | 20.4 |
| Family reunification | 29 | 28.2 |
| Rejection | 6 | 5.8 |
| Tolerated stay "*Duldung*" | 4 | 3.9 |
| Waiting for decision | 4 | 3.9 |

**Recruitment**

This study was approved by the ethics committee of Faculty of Education and Psychology at Freie Universität Berlin (approval no. 203/2018). The study was also approved by the Berlin Senate Department for Education, Youth and Family since recruitment and data collection took place in schools.

To recruit participants, we first contacted all schools in Berlin (n=418) to inform them of the study. We received confirmation from 19 schools; however, five schools later dropped out and, consequently, the data collection took place in a total of 14 schools between November 2018 and June 2019. None of the other schools were able to participate either because they were unavailable, did not have any students who met the inclusion criteria, withdrew their agreement to participate, or did not respond. It is important to note that this study was originally planned with a longitudinal design, and as such participants were invited to take part in the second wave of data collection 6-8 months after the first data collection wave. The final second wave sample consisted of 37 refugee youth from eight schools and due to the small sample size, we did not analyze the data in the current study. There were many reasons for this high attrition rate that could be relevant for researchers working with this population in the future, we detail them here. During the preparation for the second data collection wave, we were informed by some participating schools that some of the refugee students had moved to other schools, which is typical for refugee youth and their families. Refugee families commonly move between accommodation centers in different parts of the city until they find private accommodation (Alhaddad, 2021). For data protection reasons and because the approval of the Berlin Senate Department for Education, Youth and Family only covered the 19 schools that had originally agreed to take part of the study, we were not able to collect data from students in their new schools. Other reasons for the high attrition rate included students missing agreed upon session due to sickness or other commitments, schools not responding anymore or difficulty scheduling

appointments for the second wave of data collection. Moreover, in March 2020, a final testing session with two students had to be cancelled because Berlin its first Covid-19 lockdown and we hence had to terminate the second wave of data collection.

**Procedure**

During data collection, the research team, consisting of two investigators—a native Arabic speaker and a native German speaker—met with school personnel and were introduced to classes with refugee students. The research team described the study and its purpose to the class and invited interested students to participate in the study in a separate room in their schools. The classroom teacher noted down students' names on a code list, randomly assigning ID codes to participants. Participants received a card with their ID code, and the code lists were not viewed by the research team and remained in schools. Data were collected on 7-inch android tablets and students took part in the sessions in groups of up to 6 students. Importantly, everyone answered their own survey, and they were seated apart so they did not influence each other's answers. Tablets were in kiosk mode and allowed access only to the offline survey app (Offline Surveys, 2022). The survey was available in both Arabic and German and started with a consent form (see online supplementary material). Given that our participants were over 14 years of age, participants consented to taking part in the study themselves and no parental consent was required. The sessions lasted around 45 minutes on average and at the end students received a 12 Euro voucher from an electronics store as a thank you for their participation.

**Measures**

All implemented measures, along with the overall procedure, were piloted prior to data collection. At first, the full survey was conducted with a group of Arabic speaking adults and, in an individual session, with one refugee adolescent. Afterward, we conducted a pilot study in one school, with a total of six participants. We then utilized the feedback received from these participants to refine the survey, which included, for example, adding more answer options to

the socio-demographic survey. Data collected from these six participants was excluded from the main dataset.

We implemented all measures in LimeSurvey (LimeSurvey GmbH, 2017) and presented the survey on tablets in Arabic and German via the OfflineSurvey app (Offline Surveys, 2022). As this study was part of a larger research project, additional measures were implemented during the data collection session that are beyond the scope of this paper and therefore not included in the analysis. For a quantitative study on acculturation and mental health with the same sample of youth, see Meyer et al. (2023). A full list of all implemented measures can be found in the online supplementary material.

**Sociodemographic variables**

Participants answered a sociodemographic survey with questions regarding their age, gender, country of origin, legal status (being granted asylum status which was later coded as "secure status";  and subsidiary protection, rejection, tolerated stay "*Duldung*", waiting for the final decision, which was later coded as "insecure status"), along with questions regarding their travel itinerary to Germany (plane vs. land), whether they arrived in Germany alone or accompanied, and finally the number of close friends and friends originating from Germany. Further sociodemographic variables were collected but not analysed here.

**Potentially traumatic exposure and PTSD symptoms**

We measured traumatic events with a combined trauma checklist that included two standardized trauma events lists, namely the Harvard Trauma Questionnaire (Mollica et al., 1992) and the Posttraumatic Diagnostic Scale (Foa et al., 1997, 2016). The trauma list was supplemented with additional items relating to events common to the Balkan route, "ill-treatment by smugglers" and "violent attack by authorities", based on Arsenijević et al. (2017). The final checklist consisted of 24 items asking participants to report exposure to traumatic events in their home country, on the flight journey, and in Germany. If the event was

experienced or witnessed at any stage (home, journey, Germany) it was scored as "1", otherwise it is scored as "0". For the analysis, we report a sum of the events mentioned by participants.

We used the self-report PTSD Checklist for DSM-5, PCL-5 (Blevins et al., 2015) to probe for potential PTSD symptoms. The scale had 20 items which were scored on a a five-point Likert scale of (0 "not at all" to 4 "extremely") and we calculated the mean scores of the PCL-5 were for the analysis. Cronbach's alpha in the current sample was α =.92 indicating an excellent reliability of the scale.

**Depression Symptoms**

We used the depression subscale of HSCL-25 (Derogatis et al., 1974) to probe for depression symptoms. The scale consists of 15 items which were scored on a a four-point Likert scale of (1 "not at all" to 4 "extremely"), and we calculated the mean scores of HSCL-25 for the analysis. Cronbach's alpha in the current study was α = .87 indicating a good reliability of the scale

**Resilience**

We used the Child and Youth Resilience Measure, CYRM-12 (Liebenberg et al., 2013) was used to  measure resilience. The scale includes 12 items which were scored on a five-point Likert scale of (1 "not at all" to 5 "a lot"). Cronbach's alpha in the current sample was α = .80 indicating a good reliability of the scale. CYRM-12 items are available in the online supplementary materials in Arabic and German, the languages used for data collection. However, for convenience, we provide the English version of the scale in Table 2.

**Table 2**

*The Child and Youth Resilience Measure – CYRM-12* [a]

| | Scale Item [b] |
|---|---|
| 1 | I have people I look up to |
| 2 | Getting an education is important to me |
| 3 | My parent(s)/caregiver(s) know a lot about me |
| 4 | I try to finish what I start |
| 5 | I am able to solve problems without harming myself or others (for example by using drugs and/or being violent) |
| 6 | I know where to go in my community to get help |
| 7 | I feel I belong at my school |
| 8 | My family stands by me during difficult times |
| 9 | My friends stand by me during difficult times |
| 10 | I am treated fairly in my community |
| 11 | I have opportunities to develop skills that will be useful later in life (like job skills and skills to care for others) |
| 12 | I enjoy my community's traditions |

*Note.* [a] (Liebenberg et al., 2013). [b] Items scored on a five-point Likert scale (1 "not at all" to 5 "a lot")

## Analysis Plan

We used multiple regression analysis to investigate the interplay between resilience and sociodemographic factors (research question 1). The following variables were included as independent variables in the model: age, gender, legal status, flight itinerary, accompanied status, number of close friends, and number of German friends. The age variable was Z-transformed, all predictors were entered into the regression model as main effects only, and no interactions were included in the analysis.

We also used multiple regression analysis to test for associations between resilience, potentially traumatic exposure and depression symptoms and PTSD symptoms (research question 2). We conducted separate models for depression symptoms and PTSD symptoms. Predictors included resilience, potentially traumatic exposure, age, and gender. All predictors, except gender, were Z-transformed. Predictors were entered into the regression model as main effects only, and no interactions were included in the analysis. All analyses were carried out using the Statistical Package for Social Science, SPSS, version 27 for Apple Mac (OS Catalina) (IBM Corp., 2020).

**3.3 Results**

**Bivariate Relationships and Descriptive Statistics**

Participants reported a high prevalence of traumatic experiences. During data collection, we asked participants about traumatic events they had experienced in their home country, on the flight journey, and in Germany. If the event was experienced or witnessed at any stage (home, journey, Germany) it was scored as "1", otherwise it is scored as "0". Participants reported an average of almost nine different experienced or witnessed traumatic event types (*M*=8.7, *SD*=5.6, ranging from 0 to 20). The four most frequently mentioned traumatic events were being in a warzone 70.9% (*n*=73), serious accidents (e.g., explosion, fire, etc.) 66% (*n*=68), lack of food and water 58.3% (*n*=60) and feeling close to death 58.3% (*n*=60).

Next, we focus on mental health measures. The mean depression score was *M*=1.9 (*SD*=0.5). The cut-off mean score for depression is 1.75 according to a validation study in the refugee context (Lavik et al., 1999), and 57.3% of the sample (*n*=59) scored above it indicating significant emotional distress. For PTSD symptoms, we summed all 20 items (range 0-20) and used a cut-off point of 33 as indicator for probable PTSD (Weathers et al., 2013). In our sample, 16.5 % of participants (n=17) scored over 33 indicating a probable PTSD diagnosis (for details,

see Table 3). We would like to note that we used self-reported measures, and that mental health disorders would need to be diagnosed with a clinical diagnostic interview.

We also calculated correlations between the main study variables (for further details, see Table 4). The results of the correlation analysis showed that PTSD symptoms were moderately and positively correlated with potentially traumatic exposure ($r = 0.39$, $p < 0.000$) and weakly correlated with age ($r = 0.21$, $p = 0.035$). Additionally, depression symptoms were negatively and moderately correlated with resilience ($r = -0.30$, $p = 0.002$), and positively and moderately correlated with PTSD symptoms ($r = 0.63$, $p < 0.000$).

**Table 3**

*Range, Mean Values, Standard Deviations of main variables*

|  | *Range* | *M* | *SD* |
|---|---|---|---|
| Age | 14-19 | 15.9 | 1.3 |
| Close Friends | 0-30 | 7.9 | 8.1 |
| German Friends | 0-30 | 5.7 | 6.3 |
| Depression Symptoms (HSCL-25) | 1-3.4 | 1.9 | 0.6 |
| Number of potentially traumatic events | 0-20 | 8.8 | 5.6 |
| PTSD Symptoms (PCL-5) | 0-3.35 | 0.9 | 0.7 |
| Resilience (CYRM-12) | 23-60 | 46.5 | 7.8 |

**Table 4**

| | Correlations | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|
| 1 | Potentially traumatic exposure | -- | | | | | |
| 2 | Resilience | .144 | -- | | | | |
| 3 | Depression Symptoms† | .104 | **-.303**** | -- | | | |
| 4 | PTSD Symptoms† | **.392**** | -.157 | **.628**** | -- | | |
| 5 | Age | .092 | -.011 | .091 | **.208*** | -- | |
| 6 | Gender | -.172 | -.086 | .064 | .000 | .003 | -- |

*Note.* *Correlation is significant at the 0.05 level (2-tailed). **Correlation is significant at the 0.01 level (2-tailed).
†For these variables, mean scores are reported.

*Correlations between main study variables*

**First research aim: Socio-demographic variables and resilience**

We used multiple linear regression to test whether age, gender, legal status (dichotomized secure vs. insecure status), flight itinerary (and vs. plane), accompanied status (accompanied vs. unaccompanied), number of close friends (0 to 30), and number of German friends (0 to 30) were related to participants' resilience. We assessed the assumptions of the linear regression model and found no evidence of significant deviations from these assumptions. We found that the number of close friends was significantly and positively associated with resilience ($b = 0.028$, 95% *CI* [0.003, 0.053], $p= .028$). None of the other predictors in the model had a significant effect (see Table 5 for further details).

**Table 5**

*Results of Multiple Regression Analyses (First Research Aim)*

| | b | SE | β | T | p | 95% CI Lower | 95% CI Upper |
|---|---|---|---|---|---|---|---|
| **Resilience\*** | | | | | | | |
| (Constant) | 40.672 | 8.174 | | 4.976 | <.001 | 24.444 | 56.899 |
| Age | .003 | .794 | .000 | .004 | .997 | -1.574 | 1.580 |
| Gender [a] | -.638 | 1.580 | -.041 | -.404 | .687 | -3.775 | 2.499 |
| Legal Status [b] | .044 | .057 | .093 | .764 | .447 | -.070 | .158 |
| Accompanied Status [c] | 2.337 | 3.395 | .071 | .688 | .493 | -4.404 | 9.078 |
| Flight Itinerary [d] | 1.043 | 1.630 | .067 | .640 | .524 | -2.193 | 4.279 |
| Number of Close Friends | .218 | .098 | .228 | 2.224 | **.029** | .023 | .413 |
| Number of German Friends | .056 | .127 | .045 | .441 | .660 | -.197 | .309 |

*Note.* \*$R^2$= .076, [a]1: Male, 2: Female, [b]1: Secure asylum status, 2: Insecure asylum status, [c]1: Arrived unaccompanied, 2: Arrived accompanied, [d] 1: via Plane, 2: via Land

**Second research aim: Resilience, potentially traumatic exposure, and mental health outcomes**

We used multiple linear regression to investigate the interplay between resilience, potentially traumatic exposure, and mental health outcomes. We tested one model for each outcome variable (depression symptoms and PTSD symptoms, respectively). Resilience, potentially traumatic exposure, age, and gender were entered as main effects predictors. We assessed the assumptions of the linear regression model and found no evidence of significant deviations from these assumptions.

In the depression model, we found a significant main effect of resilience ($b =$ -0.176, 95% *CI* [-0.281, -0.071], $p$=0.001), with higher resilience scores relating to lower depression scores. Potentially traumatic exposure was not significant ($b =$ 0.084, 95% *CI* [-0.022, 0.190], $p$= .118).

In the PTSD model, we found a significant main effect of potentially traumatic exposure ($b =$ 0.36 95% *CI* [0.164, 0.416], $p <$ .001). In addition, there was a significant association between PTSD symptoms and resilience ($b =$ -0.148, 95% *CI* [-0.273, -0.022], $p$= .021). Taken together, higher resilience scores were associated with lower PTSD scores, whereas greater exposure to potentially traumatic events was associated with higher PTSD scores, for more details check Table 6.

**Table 6**

*Results of Multiple Regression Analyses (Second Research Aim)*

| | b | SE | β | T | p | 95% CI Lower | 95% CI Upper |
|---|---|---|---|---|---|---|---|
| Depression Symptoms [a] | | | | | | | |
| (Constant) | 1.839 | .169 | | 10.849 | <.001 | 1.502 | 2.175 |
| Resilience | -.176 | .053 | -.319 | -3.330 | .001 | -.281 | -.071 |
| Potentially traumatic exposure | .084 | .053 | .154 | 1.578 | .118 | -.022 | .190 |
| Age | .040 | .052 | .073 | .764 | .447 | -.064 | .144 |
| Gender | .069 | .106 | .063 | .652 | .516 | -.141 | .279 |

| | b | SE | β | T | p | 95% CI Lower | 95% CI Upper |
|---|---|---|---|---|---|---|---|
| PTSD Symptoms [b] | | | | | | | |
| (Constant) | .793 | .202 | | 3.918 | <.001 | .391 | 1.195 |
| Resilience | -.148 | .063 | -.210 | -2.339 | .021 | -.273 | -.022 |
| Potentially traumatic exposure | .290 | .064 | .416 | 4.564 | <.001 | .164 | .416 |
| Age | .118 | .063 | .167 | 1.881 | .063 | -.006 | .242 |
| Gender | .075 | .126 | .053 | .590 | .557 | -.176 | .325 |

*Note.* [a] $R^2 = .123$, [b] $R^2 = .231$.

**3.4 Discussion**

This study explored the resilience of Arabic-speaking refugee youth living in Germany in a cross-sectional design. We used a culturally grounded resilience scale, CYRM-12 which captures the individual, relational, and contextual aspects of youth resilience (Liebenberg et al., 2013; Panter-Brick et al., 2017). Additionally, this study focused on Arabic-speaking refugee youth, an important age demographic and cultural group for refugee research globally, as well as in Germany. First, we investigated associations between sociodemographic variables and resilience. Second, we examined the associations between resilience, potentially traumatic exposure, and depression symptoms and PTSD symptoms, age, and gender. We found that the number of close friends was the only socio-demographic variable to relate to resilience. Additionally, our analysis revealed that resilience is significantly and inversely associated with depression symptoms and PTSD symptoms, i.e., higher scores of resilience related to lower numbers of depression and PTSD symptoms. Finally, we observed that higher potentially traumatic exposure was related to an increase in PTSD symptoms, however, depression symptoms did not differ as a function of potentially traumatic exposure.

Our analysis revealed that the number of close friends was related to resilience. A previous study in Australia found an association between higher resilience scores and both the increase in the number of important people in refugee youth's network and the number of friends born in Australia (Block et al., 2017). Our findings are partially in agreement with this study as we found that the number of close friends, but not the number of German friends, was positively associated with resilience. This suggests that, for our participants, the quality of friendship may have held greater significance than the local origin of their friends. It is worth mentioning though that Berlin is a diverse city with more than a third of its population reporting personal or familial migration histories (Amt für Statistik Berlin-Brandenburg, 2019) and with a large Arabic speaking community. Future studies should bring nuance to the study of

friendship networks and explore the impact of having friends with personal or familial history of refugeehood and immigration on refugee youth resilience, independently of these friends' citizenship.

None of the other sociodemographic variables yielded significant relation with resilience. Consistent with prior studies, our findings indicate no association between age, gender, and resilience (Feyissa et al., 2022; J. H. Lee et al., 2013). The limited representation of unaccompanied refugee youth in our sample may have hindered the detection of an association between resilience and accompanied status, thereby limiting the conclusions that can be drawn from this finding. Furthermore, we did not find significant associations between resilience and legal status or flight itinerary. We had selected the covariate flight itinerary and legal status based on previous research suggesting that longer periods of uncertainty, particularly regarding legal status, constitute a risk factor to young refugees' resilience (Sleijpen et al., 2017). Our null findings regarding flight itinerary could be attributed in part to the long time that has passed since the flight and that post migrations factors could be of more relevance to our participants resilience. However, no previous study has tested the association between the flight experience and resilience, and more research is needed to understand the role flight related factors, such as prolonged uncertainty, play in refugee youth resilience.

We found a significant association between resilience and both depression symptoms and PTSD symptoms, specifically that higher resilience scores were related to both lower symptoms depression and lower PTSD symptoms. Two metanalyses reported a similar relation between resilience and mental health symptoms in diverse age groups (Hu et al., 2015; J. H. Lee et al., 2013). This relation between resilience and mental health outcomes has also been examined in adolescent population and yielded similar findings in refugee youth samples in Jordan and Australia (Panter-Brick et al., 2017; Ziaian et al., 2012), and a non-refugee youth sample in Norway (Hjemdal et al., 2011).

Regarding potentially traumatic exposure, our findings demonstrated an association only with PTSD symptoms and not with depression symptoms. This finding is in line with previous research suggesting that PTSD symptoms in refugee populations might be linked to pre-migration stressors in the home country, whereas depression symptoms are rather related to post migration stressors such as experiences of isolation and discrimination in their new country (Feyissa et al., 2022; Kien et al., 2019).

**Limitations**

Our study has several limitations. First, all participants in this study attended school, whether welcome classes intended for newcomers or regular classes (10 years of schooling are compulsory in Berlin), and the vast majority of participants lived with their families. These characteristics need to be taken into consideration when generalizing the study's findings, particularly due to the role family and schooling play in building resilience (Sleijpen et al., 2016). Second, most participants came from a single country, Syria, which may limit the generalizability of the findings to other cultural contexts or populations with different socio-cultural background. Finally, this study utilized a cross-sectional design. Although this design enabled the investigation of associations between variables at one point in time, it has limitations in providing insight into the long-term outcomes and stability of these relationships over time.

**Conclusion**

This study confirmed the importance of close relationships to refugee youth resilience as the number of close of friends was the only socio-demographic variable to relate to resilience in our sample. Furthermore, our results showed that higher levels of resilience were associated with lower levels of PTSD symptoms and depression symptoms. Overall, our study provides valuable insights into the factors contributing to the resilience and mental health of refugee youth residing in a high-income country and  have important practical implications for

researchers and practitioners working with refugee youth. Programs aimed at promoting resilience among this population should focus on encouraging the development of strong social networks and supportive relationships. Furthermore, considering resilience as an ecological multi-level construct implies that interventions targeted at one level, e.g., peers and friends, could positively impact overall resilience.

**Chapter 4.  Risk-taking, Patience, and Social Preferences of Arabic Speaking Refugee Youth in Germany: The Role of Traumatic Exposure and Mental Health**

This chapter is based on: Alhaddad, L., Stammel, N., Meyer, C., Knaevelsrud, C. van der Bos, W., & Kanngiesser, P. (2023). Risk-taking, Patience, and Social Preferences of Arabic Speaking Refugee Youth in Germany: The Role of Traumatic Exposure and Mental Health. Manuscript submitted, under review.

*Note*: This was the first-author version of a paper under review at the time. Formatting that diverges from APA 7 follows journal-specific guidelines.
 Electronic supplementary materials for this study are available through this link:
https://osf.io/bjdhx/?view_only=8d5029e9d1d242f985299b43f5021468

**Abstract**

Refugee youth are commonly exposed to traumatic events. Evidence is mixed on how this interacts with their risk-taking, patience and social preferences, and what impact youth's mental health state may have. We investigated how traumatic exposure, posttraumatic stress disorder (PTSD), and depression symptoms relate to risk, time, and social preferences of 14- to 19-year-old Arabic-speaking refugee youth in Germany (N=103, 54 female, 74.8% from Syria). PTSD symptoms, but not traumatic exposure or depression symptoms, were significantly related with increased risk preferences. However, no significant relation was found for patience, altruism, trust, positive reciprocity, or negative reciprocity. Our findings emphasize the need to differentiate between trauma exposure and PTSD symptoms when researching refugee youth preferences in high-income countries.

**Keywords**: refugee youth; mental health; decision-making; Germany; Middle East

**4.1 Introduction**

Refugees under the age of 18 account for 42 percent of refugees worldwide according to the latest estimation by UNHCR (2021). Germany is currently among the top five refugee hosting countries in the world, with the two largest groups of refugees originating from Syria and Iraq[29] (Bundesamt für Migration und Flüchtlinge, 2021).[30] Research suggests that refugee youth undergo two formative processes simultaneously, namely a developmental process as adolescents and an acculturative one as refugees forced to leave their home countries due to war, prosecution, or political instability in search of a better future (Juang & Syed, 2019). Despite the multitude of challenges refugee youth face in a high-income country like Germany, such as difficulties at school, separation from friends and family, and discrimination, they demonstrate remarkable coping (Alhaddad, Goodwin, et al., 2021).

There has been increasing interest in the factors that shape refugee youth's decision making as it allows a shift from narratives of victimhood and deficit to ones that center youth and their agency (Taylor & Carlo, 2021). Individual differences in risk preference, patience and social preferences are used as key indicators of decision making strategies in developing and psychiatric populations (Rangel et al., 2008; Sharp et al., 2012; Van Duijvenvoorde & Crone, 2013). Previous research on refugee children highlights that prosocial preferences, such as altruism and reciprocity, are considered a mark of positive development and resilience because they show how refugees assume agency in their own lives and help others (Malti et al., 2021). Moreover, a review on decision making in children and youth linked patience to better nutrition choices, and lower consumption of alcohol and Tobacco products, whereas risk-averse youth were found less likely to violate schools codes and drop out of school (Sutter et

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[30] Note that the situation in Europe is currently in flux due to the Russian invasion of Ukraine, and these figures are expected to change.

al., 2019). Additionally, risk preference predicts important life decisions in adults such as economical choices and the decision to migrate (Cobb-Clark et al., 2021).

**Developmental perspective on preferences**

Adolescence is an important period for the development of risk and time preferences. Previous research on risky behavior in adolescence shows that adolescents have a high tolerance of uncertainty (van den Bos & Hertwig, 2017). Although they are aware of the consequences of risky behavior, they do not necessarily base their decisions on that knowledge, and rather prioritize sensation seeking, with peers being a major influence (Ciranka & van den Bos, 2019, 2021). Furthermore, impatience peaks in early adolescence and decreases towards late adolescence (Achterberg et al., 2016) due to cognitive development facilitating more impulse control and a stronger focus on future goals (van den Bos et al., 2015).

As adolescents approach a new developmental stage, characterized by a need to belong, and form meaningful connections with others (Crone & Achterberg, 2022), their prosocial preferences continue to increase, reaching adult levels in late adolescence (Blakemore, 2008; Güroğlu et al., 2009). Moreover, a change from competitive behavior to more cooperative behavior has also been observed (Güroğlu et al., 2014; van den Bos et al., 2011). Developmental processes that explain this trajectory include maturation of social brain regions and the development of more sophisticated perspective-taking skills (Carlo & Padilla-Walker, 2020; Fett et al., 2014). In the context of migrant youth, studies show that their experience of navigating different cultures leads to an accelerated development of perspective-taking skills compared to their local peers (Jugert & Titzmann, 2020). Additionally, research on the experiences of U.S. Latinx youth suggests that both extra personal factors (i.e. family, school, societal contexts, along with experiences of stressful events) and intrapersonal factors (such as acculturative stress, coping, cultural values, and ethnic identity), in addition to cultural factors influence prosocial outcomes (Carlo & Padilla-Walker, 2020).

**Traumatic Exposure and Preferences**

Exposure to traumatic events is particularly relevant in the context of refugees' preferences. Previous research on risk preference following exposure to traumatic events has yielded conflicting findings. On the one hand, studies have reported that traumatic exposure was negatively associated with risk-taking behavior in refugee adults exposed to organized violence (Augsburger & Elbert, 2017), Indonesians exposed to natural disasters (Montalva, 2016), and Afghanis exposed to violent attacks (Callen et al., 2014). On the other hand, a study in Burundi found that exposure to violent conflict increased risk-seeking behavior (Voors et al., 2012). Research on traumatic exposure and risk preference in youth is limited, one study in Israel reported higher risk-taking behavior in youth exposed to violent attacks (Pat-Horenczyk et al., 2007). With regard to time preference, the mentioned study on adults in Burundi found that exposure to violence increased impatience (Voors et al., 2012). Similar results were reported for violence exposed adults in the Democratic Republic of Congo (Imas et al., 2015).

In the context of prosocial behavior, a meta-analysis revealed increased cooperation in individuals exposed to war (Bauer et al., 2016). Lifetime trauma, in addition to recent exposure to trauma, increased American university students' helping behavior (Frazier et al., 2013). Additionally, traumatic exposure increased trust and altruism in adults exposed to natural disasters in Indonesia (Montalva, 2016) and Belgium (Méon & Verwimp, 2016), violent conflict in Burundi (Voors et al., 2012), and riots in India (Islam et al., 2018). Findings from youth populations are limited: A study (2014) investigated prosociality of children, adolescents and adults affected by the war in Georgia and Sierra Leone and highlighted that exposure to war particularly during a developmental period between middle childhood and early adulthood increased prosocial behavior. Furthermore, traumatic exposure increased negative reciprocity of adult Syrian refugees in Jordan (El-Bialy et al., 2020b) and war exposure led to more positive and negative reciprocity in adults in Israel (Gneezy & Fessler, 2012). However, other

researchers reported results in the opposite direction: a study on children exposed to abuse in the UK showed reduced trust (Music, 2011) and another study on adults exposed to the Tajik civil war revealed reduced altruism (Cassar et al., 2013). Taken together, while a majority of studies have found evidence for an increase in prosociality following exposure to traumatic events, there is some indication of opposite effects, highlighting the need for further research in this area.

Previous studies on preferences have used different tools to assess exposure to war and adversities such as a victimization index (El-Bialy et al., 2020b; Voors et al., 2012), measures of economic damage and physical exposure (Montalva, 2016), or sampling in geographical regions directly affected by violent conflict (Gneezy & Fessler, 2012; Pat-Horenczyk et al., 2007). When sampling in areas of conflict, researchers measured the intensity of exposure to violence through levels of damage to property and the number of deaths (Cassar et al., 2013; Islam et al., 2018), or the number of attacks experienced in the region (Callen et al., 2014). However, the use of global measures to investigate the impact of adversity on preferences may lead to an ecological fallacy, i.e. to erroneous conclusions about factors that impact individuals based on findings from the group level (Lavrakas, 2008). Using measures to assess traumatic exposure on the individual level can provide a more accurate understanding of how individuals' traumatic exposure impacts their behaviour and preferences. For example, Bauer and colleagues used a survey asking if participants had witnessed fighting or others get injured, had household members injured, or had experienced displacement (Bauer et al., 2014). Moreover, two previous studies have utilized more extensive clinical exposure checklists in the context of refugee adults' risk preference and altruism, namely the Harvard Trauma Questionnaire (El-Bialy et al., 2020a), along with scales measuring childhood maltreatment, exposure to war and torture, and lifetime traumatic events (Augsburger & Elbert, 2017).

**Mental Health and Preferences**

Psychological reactions to adverse experiences can vary widely. Mental health research shows that depression and posttraumatic stress disorder (PTSD) are the most common mental health disorders in young refugee populations in high-income countries (Fazel et al., 2012). Importantly, reviews on refugees mental health emphasize that not all refugees exposed to traumatic experiences, whether in their home country, on the flight journey, or in the destination country, develop a mental health disorder (Frounfelker et al., 2020), and that around 19% to 54% of refugee youth in high income countries develop PTSD, while 3 to 30% of them develop depression (Bronstein & Montgomery, 2011a).

Although the influence of traumatic exposure on preferences has been discussed at length in the literature, very few studies have investigated the relation of PTSD and depression symptoms and preferences. In the context of refugee adults living in Germany, a study found that participants with more depression symptoms showed higher risk aversion, while PTSD symptoms were related to a slight increase in risky behavior (Augsburger & Elbert, 2017). Similar findings have been reported for Israeli youth (Pat-Horenczyk et al., 2007). In regard to depression research, a recent study using German Socio-Economic Panel data revealed that adults with depressive symptoms tended to be more risk aversive than those reporting no depressive symptoms (Cobb-Clark et al., 2021). Moreover, depression symptoms in a sample of U.S. Latinx youth negatively influenced youth's altruistic behavior (Carlo & Padilla-Walker, 2020). Interestingly, altruistic behavior, such as helping others, has been demonstrated to alleviate depressive symptoms in American adolescents (Schnitker, 2012), and patience training had a similar influence on American undergraduates (Schacter & Margolin, 2019). Generally, there is an evident lack of youth studies on the relation between trauma exposure, mental health, and preferences.

**Current Study**

The current study investigates how exposure to traumatic events and mental health state relate to risk-taking, patience, and social preferences of Arabic-speaking refugee youth in Germany. We used the cross-culturally validated Global Preferences Survey (Falk et al., 2016, 2018) as an outcome measure of risk-taking, patience and social preferences, given that it correlates highly with incentivized behavioral tasks, and measures preferences generally and not only in the context of, for example, financial decision making. To measure traumatic exposure, we used a trauma list combining two standardized psychological measures, namely the Harvard Trauma Questionnaire (Mollica et al., 1992) and the Posttraumatic Diagnostic Scale (Foa et al., 1997, 2016). To measure depression symptoms and PTSD symptoms, the HSCL-25 depression subscale (Derogatis et al., 1974) and PCL-5 (Blevins et al., 2015) were used respectively. Given that the current literature on the impact of exposure to adversity and mental health has revealed mixed findings and at times inconclusive results, e.g. (Augsburger & Elbert, 2017; Bauer et al., 2014; Music, 2011; Voors et al., 2012), we did not make any predictions about the direction of effects.

**4.2 Method**

**Participants and recruitment**

This study was approved by the ethics committee of Freie Universität Berlin, with approval Nr 203/2018, as well as the Berlin Senate Department for Education, Youth and Family since the study took place in schools. Berlin is the capital of Germany and a diverse metropolitan city where, at the time of data collection, immigrants and Germans of immigrant descent constituted a third of the population (over one million people) (Amt für Statistik Berlin-Brandenburg, 2019). All schools in Berlin, a total of 418, were contacted via email to inform them about the study, and 19 schools confirmed participation in the study. The rest of the schools were either not available to support data collection in their school, had no refugee

students, or simply did not respond. We presented the study to every class with eligible students and those who wished to participate joined the researchers in a separate room.

Inclusion criteria were being an Arabic-speaking refugee student over the age of 14. During data collection sessions, seven participants decided to drop out. We also excluded two participants from data analyses who, according to their stated birth month and year, were under the age of 14 (we discovered this discrepancy after data collection was completed and had no way to independently verify their ages). We did not do an a priori power analyses as our goal was to collect data from as many refugee youth as possible. Additionally, we were constrained by the number of schools that agreed to participate in the study.

The final sample consisted of 103 refugee adolescents (52.4% female, n=54) from eight Arabic speaking countries, the most frequent country of origin was Syria 74.8% (n=77), then Iraq 10.7% (n=11), and the rest were from Palestine, Lebanon, Bahrain, Egypt, Kuwait, and Libya. Participants' age ranged from 14 to 19 years (M=15.9, SD=1.3). Participants arrived in Germany between the years 2011 and 2018 with most of them arriving in 2015 (40.8%). It is important to note that most participants were children when they first arrived in Germany and their estimation of year of arrival could therefore be inaccurate. Over half of participants stated that they arrived in Germany via land 54.4% (n=56) while the rest stated arriving via plane. Legal status was classified as secure (i.e., Asylum status) in 37.9% of the cases (n=39), while the rest had an insecure legal status (including family reunification visa, subsidiary protection, rejection, tolerated stay "*Duldung*", and awaiting the final decision). All participants were attending school at the time of testing and 66% of them (n=68) attended regular classes while the rest attended welcome classes (i.e., classes intended to boost newcomer's German language skills before they are considered to join regular classes). Check table 1 for an overview of sample characteristics.

**Table 1 Characteristics of the sample**

|                          | n   | %    |
|--------------------------|-----|------|
| Gender                   |     |      |
| Female                   | 54  | 52.4 |
| Male                     | 49  | 47.6 |
| Country of origin        |     |      |
| Syria                    | 77  | 74.8 |
| Iraq                     | 11  | 10.7 |
| Palestine                | 7   | 6.8  |
| Lebanon                  | 3   | 2.9  |
| Bahrain                  | 2   | 1.9  |
| Egypt                    | 1   | 1    |
| Libya                    | 1   | 1    |
| Kuwait                   | 1   | 1    |
| Ethnicity                |     |      |
| Arab                     | 84  | 81.6 |
| Kurdish                  | 12  | 11.7 |
| Yazidi                   | 3   | 2.9  |
| Copti                    | 1   | 1    |
| Other                    | 3   | 2.9  |
| Religion                 |     |      |
| Islam                    | 98  | 95.1 |
| Izidi                    | 3   | 2.9  |
| Christianity             | 1   | 1    |
| No religion              | 1   | 1    |
| Itinerary                |     |      |
| via Land/other countries | 56  | 54.4 |
| via Plane                | 47  | 45.6 |
| Arrival in Germany       |     |      |
| Accompanied              | 97  | 94.2 |
| Unaccompanied            | 6   | 5.8  |
| School                   |     |      |
| Regular classes          | 68  | 66   |
| Welcome classes          | 35  | 34   |
| Legal Status             |     |      |
| Asylum status            | 39  | 37.9 |
| Subsidiary protection    | 21  | 20.4 |
| Family reunification     | 29  | 28.2 |
| Rejection                | 6   | 5.8  |
| Tolerated stay "*Duldung*" | 4 | 3.9  |
| Waiting for decision     | 4   | 3.9  |

**Procedure**

Data were collected between November 2018 and June 2019 in schools in Berlin, Germany. The data collection team consisted of a native Arabic speaker and a native German speaker, to answer participants' questions in both languages. At schools, teachers introduced

the two investigators to classes with Arabic-speaking refugee students between the ages of 14 and 19. The investigators then presented the study to students in their classrooms and those who agreed to participate left the classroom to a separate room in the school. Before the study started, each student received a 7 inch tablet with an offline survey app, version 1.45, that contained the survey with all measures and the screen locked on that app (Offline Surveys, 2022). To anonymize responses, we assigned each student a code, and a list pairing students' names and their assigned codes was kept by the class teacher (See Electronic Supplementary Materials B for a template of the code list). Survey questions were available in both Arabic and German, and the first screen was a consent form (see Electronic Supplementary Materials C for a screenshot of the consent form). To give consent, students clicked "I consent" and started the survey, those who did not wish to participate anymore left the room. Since participants were over the age of 14 no parental consent was required. Some students were unable to read in Arabic due to interrupted education on the flight journey and had insufficient German language skills, therefore they had the questions read out for them in Arabic (by the Arabic-speaking investigator) in the same room but away from other participants as to ensure privacy. A maximum of six students took part in each session, which lasted around 45 minutes on average. At the end of the session, participants received a 12 Euro voucher from an electronics store and a list of psychosocial counseling services available in Arabic should the need for such services arise.

We conducted a series of pilots to ensure study materials were appropriate. We tested the full survey first on a group of Arabic speaking adults and, in an individual session, with one refugee adolescent. Next, we used the first school as pilot (n=6 participants) and incorporated participants' feedback such as correcting typos and including additional answer options in the socio-demographic survey. These six participants were not included in the main dataset.

**Measures**

We implemented all measures in Arabic and German on LimeSurvey (LimeSurvey GmbH, 2017), hosted on servers of Freie Universität Berlin. Mental health measures, listed below, were translated from English to Arabic and German, back translated to English, and then compared with the original text, differences between the two versions were discussed and wording was revised accordingly. It is worth mentioning that this study was part of a bigger longitudinal research project, therefore, additional measures were implemented during the testing session that are not included in this paper, and a second data collection wave took place 6-8 months after the first one [for a quantitative study on acculturation and mental health with the same sample of youth, see (Meyer et al., 2023)]. For a record of all implemented scales check Electronic Supplementary Materials D and E. Below we only provide details on the measures that we analysed as part of the current study.

**Sociodemographic survey**. The survey included questions regarding participants' personal information such as birth month and year; and gender (female, male, other). We would like to note that the wording "other" is used here to reflect the exact wording we used in the socio-demographic survey, however, the wording "diverse" would be a better fit for future studies since that is what official German forms started using at the end of 2018 after the data collection for this study had started. The socio-demographic survey also included questions on the journey to Germany (time of arrival and type of journey), participants' education status (type of class attended) and their legal status. Secure legal status included participants with asylum status, a resident permit for three years with simplified requirements for permanent residency and citizenship. Insecure status included subsidiary protection, rejection, tolerated stay "*Duldung*", family reunification visa, and those waiting for the final decision. See Electronic Supplementary Materials E -1 for all survey questions.

**Traumatic experiences.** Traumatic exposure in the home country, during the flight journey, and in Germany was assessed using a combination of two standardized trauma events lists, namely the Harvard Trauma Questionnaire (Mollica et al., 1992) and the Posttraumatic Diagnostic Scale (Foa et al., 1997, 2016). The trauma list was supplemented with additional items, "ill-treatment by smugglers" and "violent attack by authorities", based on Arsenijević et al. (2017). Across the three lists, 24 events were scored on a three-point Likert scale with three answer options "experienced" "witnessed" and "neither-nor". The detailed three trauma lists were implemented for another analysis not reported here. For the current study, the three lists were combined, i.e., when an event was marked as "experienced" or "witnessed" in any of three lists (home country, during the flight journey, in Germany) it was scored as 1, otherwise it was scored as 0. For a record of the implemented lists check Electronic Supplementary Materials E -6.

**Symptoms of PTSD.** The self-report PTSD Checklist for DSM-5, PCL-5 (Blevins et al., 2015) was used to assess symptoms of PTSD, which has 20 items scored on a five-point Likert scale (from 0 "not at all" to 4 "extremely"). Cronbach's alpha in the current study was α =.92 indicating an excellent reliability of the scale. Mean scores were calculated for the analysis, additionally the scale was used in combination with the trauma list to screen for a possible PTSD diagnosis according to the DSM-5 criteria, for more on the clinical scoring criteria check (Weathers et al., 2013). For a record of the implemented scale check Electronic Supplementary Materials E -7.

**Symptoms of depression**. To assess depression symptoms, a subscale extracted from the self-report screening instrument Hopkins Symptom Checklist-25, HSCL-25 was used (Derogatis et al., 1974). Each of the 15 scale items was scored on a four-point Likert scale (from 1 "not at all" to 4 "extremely"). Mean scores were calculated for the analysis and interpreted in terms of symptom severity according to a cut-off point of 1.75 based on a validation study in the

refugee context (Lavik et al., 1999). In the present study, Cronbach's alpha was α = .87 indicating a good reliability of the scale. For a record of the implemented scale check Electronic Supplementary Materials E -5.

**Preferences**. The Global Preferences Survey (GPS; Falk et al., 2016, 2018) was used to measure six preferences: risk preference (one item), patience (two items), altruism (one item), positive reciprocity (one item), negative reciprocity (three items), and trust (one item). All items were scored on a Likert scale of 0 (not willing at all) to 10 (very willing). The Global Preferences Survey had been validated for adults in 76 countries including Germany and Arabic-speaking countries (Falk et al., 2016, 2018). Additionally, the risk preference item along with one patience item have been used in a German panel study with youth (Weinhardt & Schupp, 2014). We implemented Falk et al.'s (2016, 2018) Arabic and German GPS versions, respectively (see Table 2 for an overview of the survey items). For preferences with more than one item (patience, negative reciprocity) we calculated the mean score of the respective items.

**Table 2 The Global Preferences Survey**

| Variable | Scale item |
|---|---|
| Patience | How willing are you to give up something that is beneficial for you today in order to benefit more from that in the future? |
| Risk Preference | How willing are you to take risks? |
| Positive Reciprocity- | When someone does me a favor I am willing to return it. |
| Negative Reciprocity | How willing are you to punish someone who treats you unfairly, even if there may be costs for you? |
| | How willing are you to punish someone who treats others unfairly, even if there may be costs for you? |
| | If I am treated very unjustly, I will take revenge at the first occasion, even if there is a cost to do so. |
| Altruism | How willing are you to give to good causes without expecting anything in return? |
| Trust | I assume that people have only the best intentions. |

**Data Analysis**

We used multiple regression analysis to test whether traumatic events, PTSD symptoms, depression symptoms, gender, age, and asylum status predict each of the six preferences measured by the Global Preference Survey, respectively. Since the normality assumption of regression was violated, standard errors were computed on 10,000 bootstrapped samples. Age, sum scores of the trauma list, and mean scores of PCL-5 (PTSD symptoms) and HSCL-25 (depression symptoms) were z-transformed. The predictors gender and asylum status were entered as categorical variables. There was no missing data in this dataset therefore all correlations were based on all 103 cases. All analyses were carried out using SPSS version 27 for Apple Mac OS (Catalina) (IBM Corp., 2020).

## 4.3 Results

As expected, there was a high prevalence of traumatic experiences within the sample with an average of almost nine different experienced or witnessed traumatic event types (M= 8.7, SD= 5.6, ranging from 0 to 20). The four most frequently mentioned traumatic events were being in a warzone 70.9% (n= 73), serious accidents (e.g., explosion, fire, etc.) 66% (n= 68), lack of food and water 58.3% (n = 60) and feeling close to death 58.3% (n=60). The mean depression score was M=1.9, SD=0.5, the cut-off mean score for depression is 1.75 according to a validation study in the refugee context (Lavik et al., 1999) and 57.3% of the sample (n=59) scored above it, indicating significant emotional distress. According to DSM-5 PTSD diagnosis criteria (Weathers et al., 2013), 15.5 % of the sample (n=16) qualified for probable PTSD diagnosis. It is important to highlight though that a PTSD diagnosis would need to be confirmed through a clinical diagnostic interview.

Refugee youth scored below the scale midpoint on altruism (M=4.2, SD=3.2), positive reciprocity (M=3.9, SD=3.2) and negative reciprocity (M=4.1, SD=2.3). They scored closer to the midpoint on patience (M=4.9, SD=2.4) and trust (M=5.1, SD=2.9), and relatively high on risk (M=6.5, SD=2.9); the preferences response scale ranged from 0 to 10 except for the mean

scores of negative reciprocity which ranged from 0 to 9.7 (see Table 3 for details). For the correlation analysis of main study variables, see Electronic Supplementary Materials A.

**Table 3 Mean Values, Standard Deviations, Range of main variables**

|  | *Range* | *M* | *SD* |
|---|---|---|---|
| Risk | 0-10 | 6.5 | 2.9 |
| Patience† | 0-10 | 4.9 | 2.4 |
| Altruism | 0-10 | 4.2 | 3.2 |
| Trust | 0-10 | 5.1 | 2.9 |
| Positive Reciprocity | 0-10 | 3.9 | 3.2 |
| Negative Reciprocity† | 0-9.7 | 4.1 | 2.3 |
| Depression Symptoms† | 1-3.4 | 1.9 | 0.6 |
| Trauma exposure | 0-20 | 8.8 | 5.6 |
| PTSD Symptoms† | 0-3.53 | 1.0 | 0.7 |

*Note.* †For these variables the mean scores are reported

We used multiple regression to test whether depression, PTSD, traumatic experiences, legal status, gender, and age predicted participants' preferences (risk-taking, patience, altruism, trust, positive reciprocity, negative reciprocity). This resulted in six regression models in total. We found a significant relation between of PTSD and risk preference (b = 0.954, 95% CI [0.273, 1.698], p= .009), suggesting that adolescents with a higher PTSD score were significantly more risk-taking than adolescents with lower PTSD scores. However, none of the other predictors in this model had a significant relation with risk preference (see Table 4 for details). As a robustness check, we removed one item form the PCL scale which measures risk taking as a symptom of PTSD and re-ran our analysis for risk-preferences. Our regression results were virtually unchanged (see Electronic Supplementary Materials B, for details).

Regression analyses for patience, altruism, trust, positive reciprocity, and negative reciprocity showed that none of the predictors in the models had a significant effect (see Table 4 for further details). In other words, neither traumatic exposure nor mental health (i.e., PTSD and depression symptoms), age or asylum status were associated with patience or social preferences.

**Table 4 Results of Bootstrapped Multiple Regression Analyses by Preference**

| | | | | 95% CI | |
| --- | --- | --- | --- | --- | --- |
| Preference | B | SE | p | Lower | Upper |
| Risk[a] | | | | | |
| (Constant) | 6.657 | 1.187 | .000 | 4.309 | 9.150 |
| Trauma exposure[1] | -0.427 | 0.299 | .153 | -1.036 | 0.193 |
| Gender[2] | 0.804 | 0.564 | .159 | -0.244 | 1.806 |
| Age | 0.105 | 0.315 | .736 | -0.545 | 0.693 |
| PTSD Symptoms[1] | 0.954 | 0.366 | .009 | 0.273 | 1.698 |
| Depression Symptoms[1] | -0.449 | 0.372 | .225 | -1.204 | 0.270 |
| Legal Status[3] | -0.863 | 0.584 | .145 | -2.036 | 0.291 |

| | | | | 95% CI | |
| --- | --- | --- | --- | --- | --- |
| | B | SE | p | Lower | Upper |
| Patience[b] | | | | | |
| (Constant) | 5.265 | 1.060 | .000 | 3.101 | 7.444 |
| Trauma exposure[1] | -0.068 | 0.267 | .798 | -0.591 | 0.454 |
| Gender[2] | -0.538 | 0.481 | .268 | -1.468 | 0.380 |
| Age | 0.444 | 0.274 | .108 | -0.101 | 0.986 |
| PTSD Symptoms[1] | -0.003 | 0.309 | .992 | -0.672 | 0.582 |
| Depression Symptoms[1] | 0.462 | 0.288 | .112 | -0.090 | 1.062 |
| Legal Status[3] | 0.284 | 0.513 | .581 | -0.723 | 1.276 |

| | | | | 95% CI | |
| --- | --- | --- | --- | --- | --- |
| | B | SE | p | Lower | Upper |
| Altruism[c] | | | | | |
| (Constant) | 5.386 | 1.442 | .000 | 2.652 | 8.198 |
| Trauma exposure[1] | 0.107 | 0.339 | .749 | -0.509 | 0.799 |
| Gender[2] | -0.109 | 0.669 | .872 | -1.416 | 1.212 |
| Age | -0.074 | 0.319 | .818 | -0.696 | 0.587 |
| PTSD Symptoms[1] | -0.276 | 0.434 | .514 | -1.127 | 0.563 |
| Depression Symptoms[1] | -0.045 | 0.417 | .910 | -0.842 | 0.780 |
| Legal Status[3] | -0.662 | 0.696 | .344 | -2.019 | 0.738 |

| | | | | 95% CI | |
| --- | --- | --- | --- | --- | --- |

| | B | SE | p | Lower | Upper |
|---|---|---|---|---|---|
| **Trust[d]** | | | | | |
| (Constant) | 6.466 | 1.276 | .000 | 3.738 | 9.204 |
| Trauma exposure[1] | 0.213 | 0.349 | .541 | -0.492 | 0.869 |
| Gender[2] | -0.999 | 0.577 | .087 | -2.087 | 0.058 |
| Age | 0.280 | 0.326 | .391 | -0.375 | 0.902 |
| PTSD Symptoms[1] | 0.113 | 0.443 | .803 | -0.745 | 1.007 |
| Depression Symptoms[1] | 0.211 | 0.377 | .573 | -0.539 | 0.906 |
| Legal Status[3] | 0.089 | 0.601 | .885 | -1.069 | 1.188 |

| | | | | 95% CI | |
|---|---|---|---|---|---|
| | B | SE | p | Lower | Upper |
| **Positive Reciprocity[e]** | | | | | |
| (Constant) | 2.973 | 1.514 | .053 | 0.081 | 5.810 |
| Trauma exposure[1] | -0.411 | 0.327 | .209 | -1.037 | 0.246 |
| Gender[2] | 0.162 | 0.633 | .805 | -1.089 | 1.410 |
| Age | 0.447 | 0.322 | .163 | -0.169 | 1.065 |
| PTSD Symptoms[1] | 0.303 | 0.440 | .489 | -0.542 | 1.124 |
| Depression Symptoms[1] | -0.410 | 0.436 | .350 | -1.285 | 0.412 |
| Legal Status[3] | 0.433 | 0.687 | .533 | -0.971 | 1.854 |

| | | | | 95% CI | |
|---|---|---|---|---|---|
| | B | SE | p | Lower | Upper |
| **Negative Reciprocity[f]** | | | | | |
| (Constant) | 5.204 | 1.102 | .000 | 2.951 | 7.499 |
| Trauma exposure[1] | 0.102 | 0.298 | .724 | -0.511 | 0.741 |
| Gender[2] | -0.112 | 0.476 | .816 | -1.076 | 0.824 |
| Age | -0.103 | 0.274 | .707 | -0.614 | 0.381 |
| PTSD Symptoms[1] | 0.015 | 0.372 | .967 | -0.697 | 0.701 |
| Depression Symptoms[1] | -0.028 | 0.324 | .931 | -0.657 | 0.616 |
| Legal Status[3] | -0.579 | 0.553 | .300 | -1.628 | 0.440 |

*Note.* bootstrap results are based on 10000 bootstrap samples, [1] z-transformed, [2] 1: Male; 2: Female; 3: Other, [3] 1: Secure legal status; 2: Insecure legal status, [a] $R2 = .112$, [b] $R2 = .085$, [c] $R2 = .019$, [d] $R2 = .065$, [e] $R2 = .040$, [f] $R2 = .018$.

## 4.4 Discussion

This study is the first attempt to disentangle the influence of traumatic exposure and PTSD and depression symptoms on the preferences of Arabic-speaking refugee adolescents in a high-income country, namely their risk-taking, patience, and social preferences. Past research has often focused on the influence of exposure to traumatic events on one type of preference such as social preference or risk (Islam et al., 2018; Méon & Verwimp, 2016; Montalva, 2016),

but has rarely attempted to investigate a suite of preferences at a time (Voors et al., 2012). Moreover, past work has rarely examined the role of mental health disorders such as PTSD and depression in shaping preferences (Augsburger & Elbert, 2017; Pat-Horenczyk et al., 2007), and few previous studies have examined preferences in child and adult refugees (Augsburger & Elbert, 2017; El-Bialy et al., 2020b, 2020a; Malti et al., 2021). Our results demonstrate that PTSD symptoms, but not the degree of traumatic exposure or depression symptoms, are significantly related to risk preferences of refugee youth. Additionally, we show that neither the degree of traumatic exposure nor mental health state, i.e., PTSD and depression symptoms, had a significant relation with patience, altruism, trust, positive reciprocity, and negative reciprocity.

**Risk Preference**

The current study found a significant relation between risk seeking and PTSD symptoms, in other words, the more symptoms of PTSD refugee adolescents reported the more risk-seeking they were. To our knowledge, only two previous studies have tested this relation before, in the context of adult refugees in Germany (Augsburger & Elbert, 2017) and Israeli youth (Pat-Horenczyk et al., 2007). Both studies reported results in the same direction as the current study namely that higher PTSD scores were related to varying degrees of increase in risky behavior. Interestingly, while our study focused on general risk preference the aforementioned studies assessed different aspects of risk preference: One study (2007) examined 16 different risk-taking behaviors, whereas the other (2017) assessed only the financial domain of risky behavior. These findings on the relation between PTSD on risk preference imply that PTSD symptoms increase risk-taking in different domains of life, however, conclusions on causality could only be derived from longitudinal data and further research is needed to confirm causality. From a clinical perspective, the relation between risk-seeking and PTSD has been recognized by adding PTSD symptom criteria E2 "*reckless or self-*

*destructive behavior*" to the fifth edition of the Statistical Manual of Mental Disorders, DSM, (American Psychiatric Association, 2013), suggesting risk-seeking as a possible symptom of PTSD. Individuals with PTSD commonly engage in risky behaviour for various reasons: due to reduced attention and information processing, reduced ability to inhibit impulsivity, as a mean to relieve their trauma-related symptoms, e.g. through alcohol and drug abuse, or to re-expose themselves to biological arousal similar to that they experienced during traumatic exposure (Contractor et al., 2017). However, there is a need for future research to examine the other direction of this relation, i.e. whether individuals with high risk-taking behavior are more likely to develop PTSD following exposure to traumatic events.

Previous research on risk preference has focused primarily on the impact of traumatic exposure and produced mixed findings (Augsburger & Elbert, 2017; Callen et al., 2014; Montalva, 2016; Pat-Horenczyk et al., 2007; Voors et al., 2012). The current study found no effect of trauma exposure on risk preferences, which is in line with a recent study reporting no difference in risk-taking behavior between war exposed Syrian refugees living in Jordan and a Jordanian sample (El-Bialy et al., 2020a). However, it is important to highlight that a study on refugee adults living in Germany found that traumatic exposure decreased risk-taking (Augsburger & Elbert, 2017), while the only previous study on youth exposed to violent attacks in Israel yielded results in the opposite direction (Pat-Horenczyk et al., 2007). More research is needed to determine whether these inconsistency in findings are due to different age groups (adults vs. adolescents), different measures (incentivized games vs. survey scales) or whether there potentially exists no overall effect. Our findings on risk preference highlight the importance of distinguishing between exposure to traumatic events and PTSD symptoms as we found an influence of the later but not the former. We additionally emphasize that more research is needed on youth, particularly refugee youth, to contextualize our findings.

**Patience and Social Preferences**

The current study found that patience, positive reciprocity, negative reciprocity, along with trust, and altruism, could not be explained by the degree of traumatic exposure that refugee youth experienced or their mental health state. Interestingly, participants scored relatively low on altruism and both positive and negative reciprocity. Recent studies on prosocial behaviour in Syrian refugee children, aged 5 to 12 years, residing in Canada, and Syrian refugee adults residing in Jordan similarly reported decreased prosociality (El-Bialy et al., 2020a; Malti et al., 2021). Given that previous research on the effects of trauma on social preferences focused overwhelmingly on adults (Cassar et al., 2013; El-Bialy et al., 2020a, 2020b; Frazier et al., 2013; Gneezy & Fessler, 2012; Islam et al., 2018; Méon & Verwimp, 2016; Montalva, 2016) and that the only other study that included adolescents was done in a low income country (Bauer et al., 2014), it is particularly challenging to explain the difference between our null findings and those of previous studies.

It is possible that environmental factors other than trauma exposure, e.g., factors related to refugees' new country of residence, impacted preferences of refugee youth. A previous study suggested that low altruism in an adult refugee sample resulted from refugees' living conditions and a sense of no future rather than their traumatic exposure (El-Bialy et al., 2020a). Similarly, a study with adolescents found low SES background negatively impacted their prosocial behaviour (Sutter et al., 2019). The current study did not control for participants' socio-economic status, as the Berlin Senate Department for Education, Youth and Family did not permit asking participants about their parent's income and level of education. Yet, it is expected that refugee families have a lower SES upon arriving in their new country and future studies could try to take this into account.

Additional environmental factors that could impact preferences, but were not measured in our study, include school environment, acculturative stressors, and social support networks. A recent study on the school environment of at-risk American children, suggested that children-

teacher conflict along with peer rejection had a detrimental impact on their prosocial behaviour (Shi et al., 2021). In the context of U.S. Latinx youth, exposure to discrimination along with other acculturative stressors diminished their capacity to care for others, whereas access to social support through family and friends positively influenced their prosocial behavior (Carlo & Padilla-Walker, 2020). Additionally, parents' preferences predicted adolescents' preferences in the US (Samek et al., 2021). Future studies could take factors such as social support networks into consideration when researching refugee youth preferences. Finally, it is noteworthy to report that though previous research on gender and preferences suggests that women are less patient, more risk-aversive, and more prosocial than men (Falk et al., 2018), we did not find an influence of gender on refugee youth's preferences.

In the literature on risk-taking, patience, and social preferences different measures are used to assess aspects of these preferences in diverse contexts. Some measures are in the form of incentivized game-based experiments where participants make decisions with direct financial influence on their reimbursement at the end of the session (Sutter et al., 2019; Voors et al., 2012). Previous research highlighted discrepancies between behavior in the real world and game-based experiments due in part to task differences. In the real world, unlike in an experimental setting, probabilities are unknown, additionally contextual cues present at the time of making a decision influence these choices (Kosse et al., 2019; Sutter et al., 2019). Furthermore, incentivized tasks found in experimental designs are tied to financial decision-making, which is one aspect of decision-making and does not apply to other non-financial decisions made in the real world (Falk et al., 2016). Global preferences measures utilizing subjective abstract survey questions report higher validity than behavioral measures (Frey et al., 2017) and have been shown to relate to and predict decisions made in real-life situations (Samek et al., 2021). These findings were confirmed by the Global Preferences Survey across varied contexts in 76 countries (Falk et al., 2016, 2018). The wide range of methodological

designs and measures used in investigating preferences might in part explain the differing findings (Malti et al., 2021).

**Limitations**

This study has several limitations. First, due to the cross-sectional nature of the current study no causal inferences are possible. Second, the outcome measure had been previously used with Arabic-speaking adults and with German adolescents (risk-taking item), to our knowledge, it had not been previously tested in an Arabic speaking youth sample. We attempted to counter this by having two investigators present at all data collection sessions to answer participants' questions and confirm that they properly understood each item in the survey. Third, mental health scales are commonly used to give indications of clinical relevance, but sound clinical diagnosis requires clinical diagnostic interviews. To further confirm the influence of mental health state on preferences, clinical diagnoses would be needed to establish the presence of a mental health disorder. Third, finding a control group to compare our results to would have provided a chance to contextualize our findings. However, finding such a group presented a two-fold challenge, on the one hand, studies on Arabic-speaking youth with or without refugee background are scarce (Tynan et al., 2015), and on the other hand, comparing findings from studies using different measures poses its own limitations. Finally, refugee youth in general and Arabic speaking refugee youth in particular are not a monolith. This study focused on Arabic speaking refugee youth participants from eight countries, with the majority originating from Syria, yet more research with larger samples is needed to gain a detailed understanding of refugee youth preferences from different Arabic speaking countries.

**Conclusion**

Refugee youth's risk-taking, patience, trust, altruism, and positive and negative reciprocity inform decisions they make in their daily lives which impact not only their own health, and educational paths, but can also have an effect on the societal and global level, e.g.

social cohesion, peacebuilding, and solidarity in times of pandemics and other threats (Carlo & Padilla-Walker, 2020; Malti et al., 2021). The current study used a cross-culturally developed preferences measure with a strong predictive power of real-world decisions (Falk et al., 2016, 2018), along with clinically developed mental health and trauma exposure scales to assess risk-taking, patience, and social preferences in a refugee youth population with high levels of traumatic exposure. We found that PTSD symptoms had a significant positive relation with risk preference but found no effect of the degree of traumatic exposure. Whereas patience and social preferences, altruism, trust, positive reciprocity, negative reciprocity, were not predicted by trauma exposure, depression symptoms, or PTSD symptoms. A nuanced understanding of the impact of individual factors (e.g., mental health) and environmental factors (e.g., traumatic exposure) on refugee youth risk-taking, patience and social preferences can provide valuable insights for support programs for refugee youth and to promote their wellbeing and aid their social adjustment and integration in their new societies.

**Chapter 5.   General Discussion**

The aim of this dissertation was to explore the experiences of Arabic-speaking refugee adolescents living in Germany. Specifically, I pursued three research aims: (1) to develop an understanding of the main challenges faced and coping resources used by newly arrived refugee youth. (2) to explore refugee youth resilience and its association with refugee youth mental health (3) to examine factors associated with refugee youth risk, patience, and social preferences (altruism, trust, positive and negative reciprocity).

To achieve these aims, I conducted three empirical studies utilizing two datasets. The first one was a qualitative data set of 20 interviews I conducted in Berlin and Potsdam with 14–18-year-old refugee youth from Syria and Iraq. The second dataset was quantitative data I collected in 14 schools in Berlin with 14–19-year-old Arabic-speaking refugee youth participants from 8 different countries (almost 75% from Syria).

In the ensuing sections, I provide a comprehensive overview of the key findings related to my research aims and their contributions to the field of refugee youth research. Furthermore, I critically evaluate the strengths and limitations of my empirical studies and propose future directions for research and present my concluding remarks.

**5.1. Overview of findings**

**Research aim 1:**

In the first part of my PhD, I wanted to broadly examine the way newly arrived Arabic-speaking refugee youth navigate their new lives in their new countries. The first aim of this research project was to describe the main challenges Arabic-speaking refugee youth face in Germany and the coping resources they implement to address them.

In my first empirical study, presented in chapter 2, I intended to center the voice of refugee youth and their agency over their experiences. Therefore, I used a qualitative semi-structured interview design to explore the main challenges faced by refugee youth and how

they mitigate these challenges. Specifically, I relied on previous research to narrow down the most relevant areas relevant for newly arrived refugee youth (Arbabi et al., 2016; Brough et al., 2003; Gifford et al., 2009) and I used them as guide for the interview. Furthermore, I allowed space for new topics to emerge from participants and for every challenge they introduced I inquired about the way they faced and the people they relied on for support. This study did not aim to explore traumatic experiences or challenges experienced in the home country, or on the way to Germany. Rather, the main aim of this study was to capture a nuanced image of the most pressing post-migration stressors for refugee youth and how they coped with them.

The main reported challenges were related to school, friendship, psychological wellbeing, accommodation, and discrimination. Education emerged as a valuable chance and challenge for refugee youth. It has been established that refugee families have high academic aspirations for their children (Brücker et al., 2016). In addition, and as discussed in the introduction (section 1.3), children of immigrants develop through an interdependent pathway. Within this cultural developmental context, a sense of familial obligation is common (Fuligni et al., 1999). In other words, parents expect their grown children to care for them, in addition children feel a sense of gratitude to their immigrants' parents for the sacrifices they made and feel obliged to support and take care. Consequently, academic achievement represents a path towards financial stability and upward social mobility for refugee children and their families.

Psychological wellbeing was another important finding. Although this study did not probe for mental health symptoms (explored later in the second and third empirical studies), the topic was discussed often during the interviews. In these conversations, it was evident that participants had limited vocabulary to describe their emotions. Limited language around emotion could potentially hinder effective communication with peers, caregivers, and mental health professionals.

Refugee youth coped with these challenges by accessing social support (friends, family, social services) along with inner resources (avoidance, persistence, activity seeking, active engagement). The focus on resources within refugee youth social networks was expanded in the second empirical study by utilising an ecological framework of resilience and through examining the role of friends in resilience.

To summarize, this study served as a first step in the exploration of adversity and adaptation of refugee youth. Furthermore, it featured the first use of the ecological systems theory to organize the different challenges experienced by refugee youth. The influence of this theory permeated to the following study.

**Research aim 2:**

Building on the strength narrative implemented in the previous study, the second research aim of this dissertation was to explore factors influencing refugee youth resilience. Specifically, in the second empirical study of this dissertation, presented in chapter 3, I continue to explore positive adaptation in the context of adverse experiences. However, here I shift the focus from challenging post migration stressors (explored in the previous study) to potentially traumatic events. Consequently, I explored the way refugee youth resilience relates to socio-demographic variables, potentially traumatic exposure, and mental health outcomes (depression symptoms and PTSD symptoms).

Recent resilience research emphasizes that resilience is embedded in relationships and not only grounded in personal traits (discussed in section 1.4.2). Consequently, I wanted to utilize a culturally grounded ecological resilience measure that captures the individual, relational, and community aspects of this construct. This short measure had been used with Syrian refugees in Jordan (Panter-Brick et al., 2017), but to my knowledge, not in a high-income country like Germany.

The first finding of this study was the significant association between the number of close friends and resilience. This finding emphasizes the importance of social resources to resilience and echoes the finding of the first empirical study, *cf. supra*. The second major finding was that resilience inversely related to depression symptoms and PTSD symptoms. Signifying that higher scores of resilience were related to lower symptoms of both PTSD and depression. Interestingly, the analysis revealed that PTSD symptoms, and not depression symptoms, were associated with potentially traumatic experiences. Research suggests that post migration stressors are more relevant to depression symptoms than traumatic experiences related to the refugee journey (Lustig et al., 2004). Although this study did not investigate post-migration stressors, insights from the first empirical study highlight multiple post-migration stressors that have been linked in the literature to mental health problems such as discrimination and legal status (Graef-Calliess et al., 2023; Müller, Gossmann, et al., 2019; Spaas et al., 2022).

To summarise, this paper represented the first use of an ecologically grounded resilience measure with Arabic-speaking refugee youth in a high-income country. Additionally, it highlighted the importance of close friendships to refugee resilience and the association between resilience and depression and PTSD symptoms. This paper did not consider resilience as active involvement of individuals in the community. However, this aspect will be partially explored in the next study.

**Research aim 3:**

My third empirical study, presented in chapter 4, was motivated by a gap in research with refugee youth preferences, namely the lack of research that disentangled the differential influence of mental health disorders and traumatic exposure on preferences. Refugee youth preferences represent indicators for decisions they make in their daily lives influencing important aspects of their own lives, e.g., their health, and educational paths, and the lives of others, e.g. social cohesion, peacebuilding, and solidarity in times of pandemics and other

threats (Carlo & Padilla-Walker, 2020; Malti et al., 2021). And in this study, I explored the interplay potentially traumatic events and the way refugee youth behave and interact with others as reflected in their time, risk and social preferences. Here, I examined the association between trauma exposure, mental health outcomes (depression symptoms and PTSD symptoms), and refugee youth patience, risk, and social preference (altruism, trust, positive and negative reciprocity).

The main finding was that PTSD symptoms, but not traumatic exposure or depression symptoms, were significantly related with increased risk preferences. As elaborated previously, (in section 1.4) exposure to traumatic events does not always result in the onset of PTSD. Consequently, this finding emphasizes the need to disentangle mental health aspects and adverse exposure when examing refugee youth risk reference. Additionally, no significant relation was found for patience, altruism, trust, positive reciprocity, or negative reciprocity. This finding emphasizes that for the risk preference it is important to differentiate between the influence of mental health state and traumatic exposure which was commonly overlooked in previous literature. In other words, individual factors, such as mental health, are relevant to understand the preferences of refugee youth residing in high income countries. Due to the novelty of this study with this population, it is difficult to compare null finding on patience, altruism, trust, positive reciprocity, or negative reciprocity to other studies. However, this study recommends future researcher to explore other influences on refugee youth preferences, specifically environmental factors including social influences, socio-economic state and acculturation related influences.

To conclude, this study represented the first attempt to challenge the trauma exposure narrative surrounding preferences in the context of adverse events. Here, I explain the importance of exploring individual level factors such as mental health state to contextualize refugee youth risk preference. Additionally, I suggest the need to further broaden the

perspective beyond traumatic exposure and include post-migration factors to examine patience and social preferences.

## 5.2 Main contributions and implications

In the first chapter of this dissertation, I discussed different lines of research relevant to understanding the experiences of refugee youth. In the empirical chapters, I broadly shared specific contributions that each empirical study makes to the literature. In this section, I will introduce the main contributions of my doctoral research project by integrating findings across the different empirical studies in the broader literature on refugee youth. To this end this section will be organized in two parts. First, I will start by discussing the main contributions to our understanding the contextual factors relevant to refugee youth experience, namely refugee youth experiences of adversity. Next, I elaborate on relevant individual level factors for research with refugee youth, namely mental health and preferences. Importantly, implications of each contribution are thoroughly discussed within this section.

### 5.2.1. Contextual factors: refugee youth experiences of adversity

Previous research has often researched adverse exposure within the refugee population, including refugee youth (as elaborated previously in section 1.4). In fact, adverse exposure is potentially the most studied aspect of the refugee experience as reviewed by Walther (2021). This dissertation' contribution to the study of refugee youth adverse exposure lies in the wide range of explored adverse events (potentially traumatic exposure and post-migration stressors), methods used (qualitative and quantitative), and providing data from an important age demographic. I will start by discussing potentially traumatic experiences (explored quantitatively) and later expand on post-migration stressors (examined qualitatively).

**Potentially traumatic experiences.** In the quantitative studies of this dissertation (presented in chapter 3 and 4), I explored refugee youth potentially traumatic exposure by implementing widely used measures and culturally grounded scales, namely the Harvard

Trauma Questionnaire (Mollica et al., 1992) and the Posttraumatic Diagnostic Scale (Foa et al., 1997, 2016). Furthermore, I have supplemented these scales with events particularly to the experience of refugee youth arriving to Germany through the Balkan route (Arsenijević et al., 2017) to ensure the implemented measure would capture a wider range of events. The four most frequently mentioned potentially traumatic events by participants were being in a warzone, serious accidents (e.g., explosion, fire, etc.), lack of food and water, and feeling close to death. These findings are in line with previous research on potentially traumatic events experienced by young refugees (Fazel et al., 2012; Müller, Büter, et al., 2019; Scharpf et al., 2021).

Previous research has established that cumulative exposure to traumatic events, traumatic load, increases the risk of negative consequences on mental health (Sacchi et al., 2020; Suliman et al., 2009). However, types of experienced events are potentially more predictive of mental health outcomes than the mere sum of experienced events (Conrad et al., 2017). The experiences reported by participants of this research project suggest a high prevalence of exposure to assaultive violence, in the form of exposure to combat. Considered to be one of the highest risks for PTSD (Conrad et al., 2017). It is important to highlight that not everyone exposed to trauma develops mental health problems and that individual factors contribute to this discrepancy (elaborated on in section 5.2.2).

This knowledge is vital to the development of psychological interventions and prevention programs aimed at supporting refugee youth mental health. However, it is important that research surrounding refugee youth adverse experiences are not used to pathologize the individual, but rather to understand the general context refugee youth inhabit and the way political interventions could improve it. Refugees escaping wars and violence have the right to seek asylum according to international laws (elaborated in section 1.1). Providing humane living conditions and legal pathways towards asylum is a moral obligation of receiving countries (Parekh, 2020). Establishing conditions that protect human dignity during the flight

and asylum seeking process has benefits not only for the protection of refugees' lives and mental and physical wellbeing, but also for their prosperity and ability to contribute to their new countries of residence (Gowayed, 2022; Parekh, 2020). The international community's response to the Ukrainian refugee situation has highlighted its capacity to treat refugees with dignity when there is political will (Parekh, 2022).

**Post-migration stressors.** Another important side of adverse experiences of refugee youth is related to post-migration stressors. In the qualitative empirical study (chapter 2), I examined post-migration stressors experienced by the refugee youth participants. These stressors encompassed various systemic challenges related to education, discrimination, difficult living conditions, and legal status. Here I will elaborate on the most reported stressor, education.

Schools represent an important venue for refugee youth, not only to achieve a better future for them and their families but also to get in contact with their new society and foster a sense of belonging (Gruttner et al., 2018; Schachner et al., 2018). Participants of this research project reported feeling pressured by their social welfare coordinators to learn practical skills and join the workforce as soon as possible. Moreover, they were given advised that higher education is not a possible dream, and that a more practical pursuit would apprenticeship training programs "*Ausbildung*". These experiences are a result of framing immigrants and refugees as a solution to shortages in the labor force, without proper consideration of individuals' personal dreams and potentials (elaborated in section 1.1.1.). These practices represent systemic roadblocks in refugee and immigrant youth academic path. According to official reports, in the state of Berlin the percentage of students with a family history of migration leaving school without a degree is three times that of their local peers (16.7% and 5.2% respectively) (Integrationsmotoring der Länder, 2023). This discrepancy could be explained on two levels, the educational policy level and the schools' level. Firstly, German

educational policies are described as a rigid educational system originally planned for Germany that has not been reconsidered for Germany as an immigration country (Gowayed, 2022). The highly stratified German school system poses significant challenges for refugee and immigrant children who arrive during the secondary school years (between ages ten and fourteen). Their opportunities to pursue an academic track leading to higher education are limited, as most of them are placed in vocational tracks such as Hauptschule or Realschule. In contrast, the majority of German children do not attend Hauptschule. Regrettably, for many teachers and policymakers, it appears that this is the highest aspiration they hold for refugee children (Crul et al., 2019; Frankenberg et al., 2013). The second level is the school level, including factors such as relationships with teachers, peers, inclusion policies, appreciation of diversity, and teachers' intercultural competence (Alhaddad, Schachner, et al., 2021; Bešić et al., 2020; Celeste et al., 2019; Schachner et al., 2019). Interventions aimed to support refugee youth educational growth should target both of these two levels.

Taken together, this dissertation presents a valuable contribution to the literature on the contextual factors of refugee youth by capturing a nuanced picture of the myriad of adverse experiences they are exposed to.

### 5.2.2. Individual level factors: refugee youth mental health and preferences

In the previous section, I situated my findings within the discourse of refugees' adverse exposure. Next, I will illustrate the second contribution of this dissertation, namely how findings of this research project advance our understanding of refugee youth individual level factors. I will start with discussing refugee youth mental health, I will then expand on their coping strategies and resources, resilience, and preferences respectively.

Through qualitative and quantitative exploration (presented in the empirical chapter 2,3,4), mental health was a prominent aspect of this work. I have implemented two complimentary perspectives on mental health, exploring how contextual factors influence

refugee youth mental health and wellbeing, and how their mental health influences other individual level factors. The qualitative study (chapter 2) demonstrated refugee youth concerns regarding their emotional wellbeing and lack of nuanced vocabulary to illustrate them. The quantitative investigation (chapters 3 and 4) suggested a high prevalence of mental health symptoms. It is difficult to confidently estimate the actual prevalence of PTSD and depression disorders within this sample since the implemented mental health measures were self-report based and I did not conduct complementary diagnostic clinical interviews. However, the cut-off points of these scales reveal a higher potential prevalence of emotional distress symptoms than PTSD symptoms. In addition, the second empirical study (chapter 3), revealed that only PTSD symptoms, but not depression symptoms, were associated with traumatic exposure.

These findings on refugee youth mental health symptoms provide two helpful considerations. First, the insignificant association between depression and potentially traumatic exposure might be related to post migration stressors. In fact, previous research has suggested a stronger association between depression in young refugees and post migration stressors than with potentially traumatic exposure (Heptinstall et al., 2004; Lustig et al., 2004). Findings on post-migration stressors have been previously elaborated in detail (section 1.4.1, chapter 2, and section 5.2.1). Although the link between these particular stressors and depression symptoms has not been examined in this dissertation, previous research on these particular stressors with a similar population suggest a possible link (Beiser & Hou, 2016; Jakobsen et al., 2017; Montgomery & Foldspang, 2008; Müller, Büter, et al., 2019; Spaas et al., 2022; Vaid & Lansing, 2020; Walther, 2021)

Second, as previous research has established, not everyone exposed to traumatic experiences will develop PTSD symptoms (Conrad et al., 2017). In fact, research suggests a central role for individual factors such as cognitive processing and emotion regulation in explaining this discrepancy (Demir et al., 2020; Hayes et al., 2012; Specker & Nickerson, 2019).

In fact, coping strategies have been found to associate with both PTSD symptoms and emotion regulations (Khamis, 2019). Specifically, more emotion focused coping (such as avoidance, and seeking distractions) has been linked to increased PTSD, whereas seeking social support and cognitive appraisal were associated with lower symptoms. The relation between PTSD symptoms and coping strategies has not been tested empirically in this research project. However, in the empirical study on refugee youth coping (chapter 2), both coping strategies (emotional focused and problem focused coping) were reported. This might mark coping strategies as an important venue for intervention, specifically programs intended to train active problem focused coping skills. Still, more research on the interaction between PTSD symptoms, emotion regulation, and coping is needed with refugee youth residing in high-income countries to substantiate these claims.

In addition to coping, I explored refugee youth resilience to balance the trauma exposure focus of this research project with a strength-perspective. Findings on refugee youth resilience (chapter 3) suggest an inverse association with mental health symptoms (PTSD and depression) and a positive role of social networks. Specifically, an increase in the number of close friends was associated with increased resilience. Taken together, findings from coping and resilience emphasize the importance of meaningful social connections to the wellbeing of refugee youth. Recent resilience research emphasizes the importance of community resources and close relationships for resilience (Ungar et al., 2023). Future research should investigate refugee youth access to community resources and possible protective role of social networks against mental health disorders in this population.

Finally, this research project examined refugee youth preferences (chapter 4) and how they relate to individual factors (mental health symptoms) and environmental factors (potentially traumatic exposure). PTSD symptoms were found to relate to refugee youth risk preference, which is in line with findings on PTSD cognition suggesting an altered decision-

making capability, altered processing of positive rewards reduced attention and information processing, and reduced ability to inhibit impulsivity, (Contractor et al., 2017; Hayes et al., 2012). None of the other explored preferences (patience, altruism, trust, positive and negative reciprocity) were associated to mental health symptoms or potentially traumatic exposure. Previous research highlights the importance of social networks, e.g., friends and family, for the development of preference (Carlo & Padilla-Walker, 2020). Future research should consider examining the role of social network and post-migration stressors on refugee youth preferences.

To conclude, this section has defined two broad areas of contributions, namely contextual factors and individual level factors. Suggestions for preventive measures were particularly made at the policy level to improve the conditions of refugee protection, asylum procedures, and educational policies. Furthermore, interventions aimed at building individual level strengths such as resilience and active coping responses, should take an ecological and developmental psychopathology perspective into consideration. Such interventions would benefit from collaboration between different stakeholders including refugee youth, families, communities, schools and mental health providers (Herati & Meyer, 2023; Murray et al., 2010; Ungar & Theron, 2020; Vaid & Lansing, 2020).

## 5.3 Limitations and future research

The experiences of refugee youth are intricate and multifaceted, individual studies therefore have a limited capacity in describing the full spectrum of processes occurring within the individual and between the social level. Consequently, even with careful consideration paid during the planning of my doctoral research project, this work is not without limitations. In this section, I will refrain from repeating specific limitations regarding the empirical studies of my dissertation, for more on this refer to the corresponding chapter. Instead, I will explore the overarching limitations related to my doctoral research project and suggest possible directions

for future research. It is my hope that this section will encourage future researchers to delve into aspects of the refugee experience that my research has not yet covered.

This research implemented a qualitative and a quantitative design to achieve its goals. Although this has provided different insights into the experiences of refugee youth in Germany, a mixed-method approach would be recommended for future researchers. In the mixed methods approach, data integration and data triangulation are implemented to synthesizes the findings from both qualitative and quantitative data to provide a holistic understanding of the research question (Creswell & Clark, 2017). This method would be particularly helpful for the examination of culture and development in non-western populations such as the population of this research project (Bartholomew & Brown, 2012). Future researchers should also consider incorporating a participatory action approach which allows refugee youth to contribute to the research process and provide an excellent opportunity to learn from and with refugee youth (Ozer, 2017).

Another method related limitations of this research project include sample size, recruitment, and longitudinal research design. Gaining access to the refugee youth population to participate in this research project was not an easy task. For example, in the quantitative part of the project, an invitation to participate was sent to every school in Berlin with students fulfilling the age criteria (a total of 418 schools). Still, the final sample consisted of 103 students from only 14 schools. The final sample consisted of participants from 8 countries, however Syrians constituted the majority. This did not allow enough representation of other nationalities and therefore limits the generalizability of the findings. To ensure a bigger and more diverse sample size, larger teams are needed.

Moreover, the original plan for this study involved a longitudinal design, participants were invited to take part in a second wave of data collection approximately 6-8 months after

the initial data collection. However, the final sample size for the second wave consisted of only 37 refugee youth from eight schools, which was deemed too small for meaningful analysis.

Several factors contributed to this high attrition rate, which may be important for future researchers working with this population. One factor was the mobility of refugee youth and their families, as some students had moved to other schools during the preparation for the second data collection wave. Refugee families often move between different accommodation centers in search of private housing. Unfortunately, due to data protection reasons and the approval limitations from the Berlin Senate Department for Education, Youth and Family, data collection was not possible from students in their new schools. Future researchers should consider building partnerships with stakeholders including schools, community organizations, and refugee support agencies to facilitate access to a larger pool of potential participants and increase the chances of participant retention.

Another challenge is the lack of a comparison group to substantiate findings from this research project. This challenge was partially due to the novelty of the conducted studies and lack of previous studies with a similar population. Furthermore, Greenfield and Cocking (2014) challenge the norm of comparing the development of minority children residing in the Global North with their local peers. Rather, they emphasize the importance of comparing these children with their peers from their heritage countries. In other words, this would mean comparing the experiences of Syrian refugee youth living in Germany with established literature on the development and mental health of Syrian youth. Such comparisons are desperately needed to contextualize and understand young refugee experiences living in Global North. Unfortunately, and as elaborated before (section 1.3.3.), Arabic-speaking children are often not represented in psychological research samples. Regrettably, they were also absent from the above mentioned Greenfield and Cocking's (2014) seminal volume on cross-cultural development. As discussed before (chapter1), Syria has continuously been the top country of

origin of refugees since 2014 (UNHCR, 2014, 2023), and reports estimate that a third to a half of Syrian refugees are under the age of 18 (UNHCR, 2023). Indicating that young Arabic-speaking refugees are an important population for refugee research, particularly in Germany ranked among the top three refugee receiving countries (UNHCR, 2022). Answering questions regarding *how* we interpret studies' findings from this population, and *who* we compare them is becoming increasingly imperative.

Finally, I would like to mention three broad directions for future research that would be beneficial to expand our knowledge around refugee youth lived experiences. First, research is needed to understand the process of meaning making around the refugee label. While the field of adolescents' intersectional identity development considers immigration status an important dimension (Moffitt et al., 2020), little is known about identity development around the refugee status, or even the meaning youth construct around this label. Consequently, it is important to be cautious when assigning labels to research participants based solely on their biography, especially when they do not use or identify with those labels themselves (Jugert et al., 2022).

Second, the findings of this research project shed light on important aspects of the refugee experience exclusively from the perspective of youth. While this provides valuable insights, it would be helpful for future research to integrate perspectives from multiple stakeholders, including refugee parents. Parental mental health and parental preferences would be the most relevant to the empirical studies of this project, given that they are suggested to influence the well-being and preferences of refugee children. Other important aspects for research with refugee parents would be parenting values and expectations following resettlement (tradition vs innovation) (Greenfield et al., 2003). Incorporating the perspectives of multiple stakeholders would provide a more comprehensive and nuanced understanding of refugee youth experiences.

Third, it is of utmost importance that future research extends our understanding of the relational component of resilience beyond receiving (and providing) social support to account for the proactive role refugee youth play in their social networks. Engaging in activism and community organization as a form of oppression resistance has been considered a marker of resilience in LGBTQ youth (Robinson & Schmitz, 2021) and different immigrant communities (Johnson et al., 2004; O'Leary & Romero, 2011), however not yet with refugee youth. A closer examination of Arabic-speaking refugee youth civic engagement with their communities and causes relevant to them (such as refugee protection and human rights) is urgently needed.

## 5.4 Conclusion

The current refugee protection system is broken. It hinders the prospects of refugee youth due to the lack of legal pathways towards asylum and challenging resettlement conditions once they arrive in their new countries. To understand the experiences of this group, a humane and strength-based perspective is necessary, recognizing the potential and dignity of refugee youth.

My doctoral research project specifically focused on the experiences of Arabic-speaking refugee youth in Germany, with the aim of striking a balance between exploring their exposure to adversity and examining their capacity for adaptation and resilience. The empirical work of this project provided nuanced insights into both individual and contextual aspects of the refugee youth experience. It shed light on common potentially traumatic events and challenging post-migration stressors encountered by Arabic-speaking refugee youth. Additionally, it demonstrated a positive association between PTSD and both potentially traumatic exposure and risk-taking behavior. Furthermore, it revealed an inverse relation between resilience and symptoms of both PTSD and depression. Lastly, it underscored the significance of social networks in fostering coping and resilience among Arabic-speaking refugee youth.

The population of this research project, Arabic-speaking refugee youth, constitute an important and steadily growing demographic in Germany. Therefore, it is crucial to establish supportive contexts that enable them to develop to their full potential and contribute to their new country. Importantly, the refugee status held by participants of this research project was not their choice. Rather, it was inflicted on them by capitalistic political interests and oppressive systems that fuel conflicts and political instability. With the increasing numbers of asylum seekers worldwide and the anticipated impact of the climate crisis on migration, there is a dire need for political advocacy around humane refugee protection procedures for *all* refugees. In addition, a research focus on decolonization and dismantling oppressive systems and social injustices is crucial. In doing so, future generations will no longer be tasked with building resilience and can rather thrive in a more just and equitable world.

# Acknowledgments

First and foremost, I would like to express my deepest gratitude to my primary supervisor, Patricia Kanngiesser. Your exceptional guidance, expertise, and unwavering support have been invaluable throughout this dissertation journey. Your dedication to my academic growth and availability whenever I needed assistance have made a profound impact on the quality and outcomes of this research.

I would also like to express my sincere appreciation to my co-supervisor, Christine Knaevelsrud. I am grateful for the valuable support and insights you provided throughout this journey. Your expertise has contributed significantly to the development of this research. I am also sincerely thankful to the Clinical Psychological Intervention research team. Nadine Stammel, thank you sincerely for your valuable contributions and continuous support. Caroline Meyer, I am so very grateful to your kindness, compassion, and wonderful support.

I want to extend my heartfelt gratitude to Maja Schachner, thank you sincerely for giving me the time and space to finish my doctoral dissertation. Thank you for your continuous mentorship, the network, and the wonderful opportunities you have provided me with to expand my knowledge and skills.

In addition, I would like to express my heartfelt gratitude to my friends.Thank you for your presence, support,and understanding. Thank you for the endless laughs and all the joy and balance you bring to my life.شلة أوقات الخير. , I am deeply grateful for your friendship.

To my beloved family, I am eternally thankful for your unwavering belief in me and your continuous encouragement. Your sacrifices, understanding during times of stress, and unconditional love have been pivotal in keeping me motivated throughout this challenging journey and provided the foundation for my success. Mama, Baba, Lama, I dedicate my dissertation to you.
Teta and Jeddou, I miss you terribly and I wish you were here with me to witness this milestone. To my extended family, thank sincerely for your love and unwavering support across borders, across continents.

Lastly, I extend my gratitude to all the individuals who have contributed to this research, whether through their participation, feedback, or assistance. Your contributions have enriched this study, and I am sincerely grateful for your involvement.

The completion of this dissertation would not have been possible without the guidance, support, and encouragement of these individuals. I am profoundly grateful for their contributions to my academic and personal growth.

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**Selbstständigkeitserklärung**

Hiermit erkläre ich, die vorliegende Dissertation selbstständig verfasst und ohne unerlaubte Hilfe angefertigt habe.

Alle Hilfsmittel, die verwendet wurden, habe ich angegeben. Die Dissertation ist in keinem früheren Promotionsverfahren angenommen oder abgelehnt worden.

Ort, Datum: Berlin, 30.05.2023

Eigenhändige Unterschrift _____

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