

Aus dem Institut für Global Health der Universität Heidelberg  
Direktor: Prof. Dr. Dr. Till Bärnighausen

**Temporary labour migration and left-behind children:  
effects of labour migration in Georgia**

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Dekan: Herr Prof. Dr. Hans-Georg Kräusslich

Doktorvater: Herr apl. Prof. Dr. Volker Winkler

## DEDICATION

*To my family, who showed me endless love and support  
To children of migrant parents in Georgia, who taught me the virtues of vulnerability and  
resilience*

# TABLE OF CONTENT

DEDICATION .....	iii
ABBREVIATIONS .....	vii
LIST OF TABLES .....	ix
LIST OF FIGURES .....	xi
<b>1. INTRODUCTION.....</b>	<b>1</b>
1.1. Globalization and population mobility.....	1
1.1.1. Migration: global trends, Europe, Eastern Europe, Georgia .....	2
1.1.2 Main groups of migrants: labour migrants and their left-behind children .....	5
1.2. Child and adolescent health.....	8
1.2.1. General health, mental health, and well-being .....	8
1.2.2. Children’s coping and resilience .....	11
1.2.3. Left-behind children .....	13
1.3. Country of origin – left-behind children in Georgia .....	20
1.4. Objectives.....	22
<b>2. MATERIALS AND METHODS .....</b>	<b>23</b>
2.1. A mixed methods Study design.....	23
2.2. Impact of international migration on the mental health and well-being of left-behind children (systematic literature review).....	25
2.2.1. Search strategy.....	25
2.2.2. Data extraction.....	26
2.2.3. Quality assessment and risk of bias .....	26
2.2.4. Analysis .....	26
2.3. Schoolteachers’ perceptions of labour migration and left-behind children (qualitative study).....	27
2.3.1. Theoretical Framework.....	27
2.3.2. Study setting and sampling.....	28
2.3.3. Data collection.....	28
2.3.4. Data Analysis.....	30

2.4. Left-behind children’s self-reported emotional and behavioural problems (quantitative school survey) .....	30
2.4.1. Study setting and sampling.....	31
2.4.2. Data collection.....	31
2.4.3. Statistical analysis.....	34
2.5. Left-behind children’s experience, coping with migratory separation and resilience (qualitative study).....	36
2.5.1. Theoretical framework .....	37
2.5.2. Study setting and sampling.....	37
2.5.3. Data collection.....	37
2.5.4. Data analysis.....	39
2.6. Mixed methods analysis.....	39
2.7. Ethical Considerations.....	41
<b>3. RESULTS .....</b>	<b>42</b>
3.1. Impact of international migration on the mental health and well-being of left-behind children.....	42
3.1.1. Study selection and characteristics .....	42
3.1.2. Geographical context.....	46
3.1.3. Gender and age aspects.....	49
3.1.4. Synthesis of Results.....	50
3.2. Schoolteachers’ perceptions of labour migration and left-behind children .....	54
3.2.1. Sample characteristics .....	54
3.2.2. Theme 1: Social and economic impact of migrant labour.....	55
3.2.3. Theme 2: Relationships between schools and transnational families.....	60
3.3. Left-behind children’s self-reported emotional and behavioural problems .....	63
3.3.1. Sample characteristics .....	63
3.3.2. YSR syndrome scales, comparison with ASEBA Standard .....	65
3.3.3. Bivariable linear regression .....	68
3.3.4. Multiple linear regression .....	70
3.4. Left-behind children’s experience, coping with migratory separation and resilience .....	74

3.4.1. Sample Characteristics .....	74
3.4.2. Theme 1. The time dimension .....	76
3.4.3. Theme 2. Family connectedness.....	77
3.4.4. Theme 3. Positive attitudes and self-care .....	79
3.4.5. Theme 4. Friends, school and social interactions .....	81
3.5. Mixed Methods – integrated results .....	85
<b>4. DISCUSSION</b> .....	<b>87</b>
4.1. Impact of international migration on mental health and well-being of left-behind children .....	87
4.2. Schoolteachers’ perceptions of labour migration and left-behind children .....	90
4.3. Left-behind children’s self-reported emotional and behavioural problems .....	93
4.4. Left-behind children’s experience, coping with migratory separation and resilience .....	95
4.5. Discussion of Integrated results .....	97
4.6. Strengths and Limitations.....	98
4.7. Implications for research and policy .....	104
<b>5. SUMMARY</b> .....	<b>107</b>
ZUSAMMENFASSUNG .....	109
REFERENCES .....	111
LIST OF PUBLICATIONS .....	137
APPENDICES .....	141
CURRICULUM VITAE.....	154
ACKNOWLEDGEMENTS .....	157
EIDESSTATTLICHE VERSICHERUNG (AFFIDAVIT) .....	160

## ABBREVIATIONS

AESC	Anger Expression Scale for Children
ASEBA	The Achenbach System of Empirically Based Assessment
CBCL	Child Behaviour Checklist
CD	Cannot determine
CELB-MD/GE	Migration, Children and the Elderly Left Behind in Moldova and Georgia project
CHAMPSEA	Child Health and Migrant Parents in Southeast Asia project
CI	Confidence Interval
COREQ	Consolidated criteria for reporting qualitative research
COVID-19	Coronavirus Disease 2019
DHS	The Demographic and health Surveys
EPOC	Effective Practice and Organization of Care
EU	European Union
EUROSTAT	The statistical office of the European Union.
FGD	Focus group Discussion
GEOSTAT	National Statistics Office of Georgia
IDI	In-depth interview
ILO	International Labour Organization
IOM	Institute of Migration
LBC	Left-behind children
MANOVA	Multiple analyses of variance
MSPSS	Multi-Dimensional Scale of Perceived Social Support
NA	Not applicable

NCDC	National Center for Disease Control and Public Health
NIH	National Heart Lung and Blood Institute
NIMH	National Institute of Mental Health
Non-LBC	Non-left-behind children
NR	Not reported
PCRSS	The Parent-Child Relationship Schema Scale
PPVT	Peabody Picture Vocabulary Test
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analyses
PubMed	Public/Publisher MEDLINE
QSR	Qualitative research software developer
SCMI	The State Commission on Migration Issues in Georgia
SDG	Sustainable Development Goals
SDQ	Strength and Difficulties Questionnaire
SMFQ	Short Mood and Feelings Questionnaire
SZS	Samegrelo-Zemo Svaneti region
TA	Thematic Analysis
TDS	Total Difficulties Scores
UN DESA	United Nations Department of Economic and Social Affairs
UNDP	United Nations agency on international development
UNECE	United Nations Economic Commission for Europe
UNICEF	The United Nations Children's Fund
YSR	Youth Self-Report

## LIST OF TABLES

Table 1. Youth Self Report (YSR) broad-band scale scores, total problem score, computation..	33
Table 2. Study characteristics by country and participant age, risk of bias ABC (A- low, B - moderate, C-high risk; study quality assessment scores in brackets, ID numbers refer to the publications. ....	44
Table 3. Studies reporting abnormal Strengths and Difficulties Questionnaire (SDQ) scores among left-behind and non-left-behind children by country and migrant parent’s or child’s gender.....	51
Table 4. Studies reporting Total Difficulties Scores (means) from Strengths and Difficulties Questionnaire (SDQ). Higher psychological distress is indicated by a higher score. Studies have performed chi-squared tests and analysis of variance (ANOVA). ....	52
Table 5. Children’s mental health and well-being outcomes by their parents’ migration status (Study IDs in superscript) .....	52
Table 6. Characteristics of participating schools, and estimated percentage of left-behind children .....	54
Table 7. Main themes and corresponding subthemes identified through reflexive thematic analysis.....	55
Table 8. Characteristics of participating schools (location, number of students, and participation) .....	63
Table 9. Participant characteristics (n=933) .....	64
Table 10. Youth Self Report - descriptive statistics for eight syndrome scales, broadband internalizing, and externalizing. Number of observations, mean scores, and p-values; comparisons among girls and boys of the study sample and with the ASEBA Normative Sample .....	66
Table 11. Youth Self Report - descriptive statistics for eight syndrome scales, broadband internalizing, and externalizing. Number of observations, mean scores, and p-values; comparisons between left-behind and non-left-behind children.....	67
Table 12. Bivariable linear regression utilizing the broad internalizing and externalizing scales- results for girls. Source: (Antia et al. 2023).....	69
Table 13. Bivariable linear regression utilizing the broad internalizing and externalizing scales- results for boys. Source: (Antia et al. 2023) .....	71
Table 14. Multiple linear regression analysis utilizing the broadband internalizing and externalizing scaes - results for girls. Source: (Antia et al. 2023) .....	72

Table 15. Multiple linear regression analysis utilizing the broadband internalizing and externalizing scales - results for boys. Source: (Antia et al. 2023).....	73
Table 16. Characteristics of participants: gender, age, parental migration profile .....	75
Table 17. joint display of mixed methods results exploring effects of labour migration in Georgia.....	85

## LIST OF FIGURES

Figure 1. Map of Georgia. Source: (Worldometer 2023) .....	4
Figure 2. Procedural diagram for the mixed methods study design leading to the results .....	24
Figure 3. Qualitative study with schoolteachers, data collection and analysis procedures .....	29
Figure 4. Quantitative survey with schoolchildren, data collection and analysis procedures .....	32
Figure 5. Qualitative study with schoolteachers, data collection and analysis procedures .....	38
Figure 6. Mixed methods data analysis procedures .....	40
Figure 7. PRISMA diagram: Study selection. ....	43
Figure 8. Main themes with the respective subthemes derived from thematic analysis.....	76

# 1. INTRODUCTION

This section describes globalization in the context of population mobility. It provides an overview of global migration trends, focusing on Europe, Eastern Europe, and Georgia. It introduces different groups of migrants and centres on labour migrants, their transnational families, and left-behind children.

The second part of the introduction summarises children and adolescents' general health, mental health, well-being, coping, resilience, and gender aspects.

As this thesis focuses on left-behind children in the Eastern European country of Georgia, the final section of the introduction presents transnational families and children in Georgia and the study's main objectives.

## 1.1. Globalization and population mobility

Globalization is the connections and dependencies between people, cultures, economies and countries (Kavinya 2014). While it has been occurring for millennia (James and Steger 2014), the frequent use of the term started in the twenty-first century (Bettcher and Lee 2002). Globalization is a notion that, for certain people, contains the potential for a better future, while for others, it represents a threat that must be faced and mitigated (Bettcher and Lee 2002).

Population mobility has become an integral part of globalization in this century (Davies et al. 2009; McAuliffe and Triandafyllidou 2022). The factors that motivate or force people to migrate are called *pull* and *push* (Clark 2007; Simpson 2022). *Pull* stands for benefits, such as better living and working conditions of host countries, while *push* are the conditions of home countries that make people leave. Global events, such as war, conflicts, geopolitical and economic transformations, and pandemics, including the recent COVID-19, stimulate and define migration trajectories (McAuliffe and Triandafyllidou 2022).

### **1.1.1. Migration: global trends, Europe, Eastern Europe, Georgia**

#### **Global trends**

Given that data on global migration flows are lacking, all numbers presented in this section come from the United Nations Department of Economic and Social Affairs (UN DESA) and the Institute of Migration (IOM) (UN DESA 2021). Obtaining global-level data on migration flows has proven extremely challenging and is restricted to 45 countries (McAuliffe and Triandafyllidou 2022).

Human migration undergoes significant changes and affects nearly every society globally. Investigating historical and recent events sheds light on future migration trends (McAuliffe and Triandafyllidou 2022).

The UN DESA estimates that the number of international migrants has increased from approximately 173 million in 2000 to 281 million in 2020 (UN DESA 2021). Of 20 leading migrant-receiving countries, the United States remains the top destination, taking in more than 50 million international migrants; Germany hosts around 16 million migrants, followed by Saudi Arabia, Russia and the United Kingdom (UN DESA 2021). For the migrant-sending countries, with 18 million Indians living outside their country of birth, India ranks on the list of nations with the largest diasporas in 2020, followed by Syria, China, Mexico, Russia, and the United States (UN DESA 2021).

Regarding inter or intra-regional migration, most European migrants remain within Europe, while migrants from other continents, including Africa, Central Asia, and South Asia, migrate outside their regions (McAuliffe and Triandafyllidou 2022; UN DESA 2021). More than 50% of international migrants are women, and over 70% are between the ages of 20 and 65 (McAuliffe and Triandafyllidou 2022). As a result, the globalized world consists of an ageing population, with a young population on the move (Clark 2007).

#### **Europe**

Europe is the largest migrant-hosting region in the world, where almost a third (87 million) of international migrants reside; more than 50% of people are intra-regional migrants, meaning they originate from Europe (McAuliffe and Triandafyllidou 2022; UN DESA 2021). Germany is a

leading European country hosting around 16 million migrants, followed by the United Kingdom (9.4 million), France (8.5 million), Spain (6.8 million) and Italy (6.4 million). For intra-regional migrants, the primary migration channels into Europe are from the former Soviet Union (UN DESA 2020).

### **South-Eastern and Eastern Europe**

Eastern European nations, such as Russia (11 million), Ukraine (6 million), Poland, and Romania, have the highest emigration rates within the continent (McAuliffe and Triandafyllidou 2022; UN DESA 2020). As of 2020, Russia was also one of the significant countries of origin. Cross-border and internal displacement, fuelled by conflict and natural disasters, are notable characteristics of the sub-region, such as Ukraine (McAuliffe and Triandafyllidou 2022).

### **Georgia**

Georgia is a country in Eastern Europe (Figure 1.), one of the former Soviet-Union nations, where migration became common after reclaiming its independence in 1991 (SCMI 2021). Emigration flows in the country are primarily affected by socio-economic factors, political instability, emigrant networks overseas and improved educational prospects (SCMI 2020). As a result, the National Statistics Office of Georgia (GEOSTAT 2023) documents that the population has decreased by more than 20% since 1989 compared to when the country was still part of the Soviet-Union (from 5.4 million in 1991 to 3.7 million in 2022). It is estimated that by 2050, Georgia will be one of the five countries worldwide that has lost most of its population (Labadze and Tukhashvili 2013).



### **1.1.2 Main groups of migrants: labour migrants and their left-behind children**

Numerous definitions of *migration* and *migrants* are available. Classifications differ in terms of their purpose, such as legal, political, geographical, or other. Despite the efforts, clear, unified definitions of terms are still unavailable for investigating and addressing migrant needs. The International Organization of Migration (IOM) defines *migration* as “The movement of persons away from their place of usual residence, either across an international border or within a State” and *migrant* as a “Person who moves away from his or her place of usual residence, whether within a country or across an international border, temporarily or permanently, and for a variety of reasons” (Sironi 2019).

#### **Labour migrants**

Almost 170 million people accounting for more than 60% of all migrants, move abroad to seek employment opportunities (Rakotonarivo 2021). While two-thirds of migrant workers are employed in the wealthiest countries, less than 4% reside in low-income nations; however, upper-middle-income countries are becoming more popular among migrant workers. Considering gender, available data shows that more men (58.5 %) are employed abroad than women (41.5%) (Rakotonarivo 2021).

International labour migrants support their families and communities who remain in their countries of origin (McAuliffe and Triandafyllidou 2022). Many migrant-sending low and middle-income countries rely on remittances. India, China, Mexico, the Philippines, and Egypt are leading remittance-receiving nations worldwide. In terms of personal transfers to other countries, the EU continues to be a net payer (European Statistical Office 2023).

#### **Transnational families**

This thesis centres on a major migrant group, temporary labour migrants and their transnational families.

Various definitions are used for *temporary* or *circular* migration (UNECE 2016). The Global Forum of Migration and Development (2007) defines *circular* migration as “The temporary, recurrent movement of people between two or more countries, mainly for purposes of work or

study.” Most temporary migrants form so-called *transnational families*, in which one (or several) family member(s) is a migrant worker, while others stay in their countries of origin (Schmalzbauer 2004); this phenomenon is called *transnationalism* (Vertovec 2001). It became popular due to recent technological developments, enabling families to maintain closeness; it also became an essential source of income (Vertovec 2001).

The notion of *transnationalism* in the context of globalization and population mobility has been increasingly used in research (Kemppainen et al. 2022; Mazzucato and Schans 2011; Schmalzbauer 2004; Vertovec 2001). However, some scholars claim that most research on migrants focus on families migrating together and exclude transnational family members; moreover, the authors emphasize the research gap in addressing the health and well-being needs of these families (Mazzucato and Schans 2011). Migrants in transnational families are different from those who migrate with their families because, in addition to the challenges all migrants face (e.g., integration into the host country and language barriers), they need to cope with migratory separation (Shih 2015).

Globally, more than 190 million people live in transnational families, where migrants perform low-skilled domestic or construction work. At the same time, their children, spouses and elderly parents are *left-behind* in the country of origin (International Organization for Migration 2023).

### **Left-behind children**

According to recent estimates/statistics, more women than men migrate for work, meaning most have to leave their children behind (International Organization for Migration 2023). The United Nations Children’s Fund (UNICEF) defines *left-behind children* as “children raised in their home countries or in their countries of habitual residence, who have been left behind by adult migrants responsible for them” (UNICEF 2023c). International Organization for Migration categorizes *left-behind children* under vulnerable populations such as irregular migrants, migrants in custody, child migrants, and unaccompanied minors (International Organization for Migration 2020). Even though the children of migrant workers are not migrants themselves, they are equally or even more severely affected by parental migration.

Global migration is on the rise, and as a result, millions of children are left behind in their home countries while parents migrate abroad (Fellmeth et al. 2018). Global estimates on the number of left-behind children are not available; countries use various methodologies, and there needs to be more information on undocumented and seasonal migration (UNICEF 2023c).

In most low-and middle-income countries, labour migration is international, while China, with more than 60 million left-behind children, is the top country of internal rural-urban migrant workers (Yuan and Wang 2016). Southeast Asia is one of the leading regions of transnational families; for example, 27% of children in the Philippines have at least one migrant parent (Cortes 2015). Labour migration is also increasing in Africa; Ghana is one of the major migrant-sending countries in the continent, where more than 37% of children are left-behind (Cebotari et al. 2018a). In Europe, eastern European countries, such as Moldova, Georgia, Lithuania, and Romania, are prominent (Cebotari et al. 2018b; Leskauskas et al. 2020; Tomşa and Jenaro 2015).

Most parents who migrate internally or internationally are motivated to create better living conditions for their children, better education, healthcare, and well-being (Fellmeth et al. 2018). For example, Cortes claims that transnational families in the Philippines are not extremely poor; they have sufficient resources to cover essential living costs, yet, parents still migrate to provide private schooling or better health insurance for their children (Cortes 2015). Available literature suggest that despite economic benefits, left-behind children lack parental care and consequently are vulnerable to poor health, especially mental health and well-being (Aryal et al. 2019; Bhugra 2021; Hu et al. 2018a; Umami and Turnip 2019; Zhao et al. 2018).

In order to ensure that left-behind children can realize their full potential, UNICEF highlights the need for a clear connection between children's well-being, labour, and migration policy (UNICEF 2023c).

## **1.2. Child and adolescent health**

The World Health Organisation (WHO) states that “Every child should have every opportunity to live a healthy and meaningful life” (World Health Organisation 2021). Childhood and adolescence are critical developmental phases that include distinct physical and mental health and well-being requirements. The healthcare system, family and social structures, and individual health behaviours all influence children’s health and well-being (Robert Koch Institut 2023).

The United Nations Agency on International Development (UNDP) sets maintaining and improving health and well-being as one of the central Sustainable Development Goals (SDG 3) (UNDP 2015). Despite the significant developments, child and adolescent health needs are not equally met worldwide; thousands of children die from preventable diseases and lack access to clean water, sanitation, and nutritious food (World Health Organisation 2021).

### **1.2.1. General health, mental health, and well-being**

#### **General health**

Protecting and promoting child health is one of the central aims of WHO (World Health Organisation 2022). Nevertheless, children in the African Region have one of the highest mortality rates worldwide (72 deaths per 1000 live birth). Only a few countries, such as the Democratic Republic of the Congo, Ethiopia, India, Nigeria and Pakistan, contribute a majority of deaths worldwide, highlighting significant disparities across countries (World Health Organisation 2022).

Globally, those aged 5 to 24 have a lower risk of dying than children under five, and numbers have declined significantly in the last 30 years (UNICEF 2023a). The leading causes of child mortality differ across countries. Children under five are particularly vulnerable to infectious diseases, while adolescents are more prone to non-communicable diseases and injuries (UNICEF 2023b).

Child malnutrition and stunting are key health indicators. Child malnutrition occurs when there is an imbalance between needed and supplied nutrients. Almost 150 million children under five are

stunted globally; again the African Region is prominent, followed by Southeast Asia and the Eastern Mediterranean Regions (World Health Organisation 2022).

Along with malnutrition, overweight and obesity continue to be the leading causes of ill health in children. WHO estimates that almost 7% of global children are obese, with the highest percentage in the United States (14.4%) (World Health Organisation 2022). The Demographic and Health Surveys (DHS 2019) data demonstrates that child and adolescent obesity is associated with socioeconomic conditions and is more prevalent in children from wealthier households.

Cancer is one of the main causes of death among children and youth, with leukaemias, lymphomas, brain cancers and neuroblastomas being the most common. In high-income nations, more than 80% of children get cured, while in low and middle income-settings, survival is less than 30% (World Health Organisation 2023a).

In recent years, air pollution and greenhouse gas emissions have become new threats to the health of children. Recent data suggest that more than 7 million annual deaths are attributed to air pollution alone (World Health Organisation 2023b).

Climate change and air pollution are not the only dangers for young people. WHO (World Health Organisation 2023b) calls for global actions to protect children from unhealthy lifestyles, nutrition, conflict, violence, migration, and health inequities.

### **Mental health and well-being**

Childhood and teenage years are turbulent periods of development, a time of building social-emotional skills, integrating into communities, and becoming more independent. Therefore, maintaining good mental health is essential for children's prosperous future (NIMH 2023).

The environment in which children grow impacts their development (World Health Organisation 2023c). Children with unsafe, less caring and loving environments at their homes, schools, and communities are more likely to develop mental disorders, such as anxiety and depression (World Health Organisation 2023c). Mental illnesses are common among adults who have had symptoms early, though they may have remained undiagnosed and untreated (NIMH 2023).

Worldwide, mental illnesses are one of the leading causes of death among children and youth. For example, suicide is the most common mortality cause for 16 to 19 years olds (World Health Organisation 2023c). UNICEF states that every seventh adolescent in the globe (166 million) develops at least one mental health condition (UNICEF 2021). Overall, more than half of lifetime mental illnesses manifest during childhood (Kessler et al. 2007). The earlier children receive treatment, the less prone they will be to mental illnesses during adulthood (NIMH 2023).

Most child and adolescent mental health studies measure and discuss broadband *internalizing* and *externalizing* problems (Deighton et al. 2014; Zahn-Waxler et al. 2000; Seligman and Ollendick 1998). *Internalizing* is defined as “core disturbance in anxiety and depression” while *externalizing* means expressed behaviours that are harmful and negatively affect others (Zahn-Waxler et al. 2000). Some scholars suggest using the developmental psychopathology framework to understand the causes and complexities of internalizing and externalizing problems (Zahn-Waxler et al. 2000). Academics highlight the potential of the developmental psychology approach to understanding the interactions between the individual and his or her environment; these interactions are integral to human development (Cummings et al. 2020).

When investigating broadband internalizing and externalizing problems in children and adolescents, researchers found a gender gap (Helstelä and Sourander 2001; Rescorla et al. 2007). Girls are more likely to have internalizing problems, and boys are more likely to experience externalizing problems (Heyerdahl et al. 2004; Sandoval et al. 2006; Shahini et al. 2015). Furthermore, adolescent girls are twice as likely to suffer from depression and anxiety as boys (Alves et al. 2011). Overall, studies have also identified age as a significant contributor to emotional and behavioural problems; older adolescents report worse mental-health outcomes than children and younger adolescents (Rescorla et al. 2007; Sandoval et al. 2006; Shahini et al. 2015).

Existing literature suggests that adolescents with poor mental health and well-being may perform poorly in school, encounter challenges in their social lives, and possess personal problems, denoting that mental health will affect all aspects of their lives (European Network of Ombudspersons for Children 2018). Due to its complex nature, ensuring young people’s health is a global challenge that warrants global attention. Children in vulnerable situations such as migration, poverty, and unsafe environment face challenges in seeking/accessing health care

(Hindley and Whitaker 2017). Scholars recognise that ensuring good mental health requires a holistic approach (e.g. early diagnosis and intervention) and value-based health systems in which children's mental health becomes main priority (Hindley and Whitaker 2017).

### **1.2.2. Children's coping and resilience**

Stressful life events are often unavoidable during childhood and adolescence. Developing effective coping mechanisms is necessary for youth to mitigate the adverse effects of stress. Research indicates that children with suppressed emotions, avoidance tendencies, and weak coping skills are more likely to suffer from mental health problems (Compas et al. 2017). In contrast, positive coping strategies help them regulate negative emotions, resulting in better health (Compas et al. 2017).

The terms *coping* and *resilience* are widely used in mental health, medicine, psychology, sociology, and public health. *Coping* is an individual's response to a situation that is perceived as stressful and involves thoughts and specific actions (Folkman and Moskowitz 2004). These thoughts and actions need controlling, effort-intensive approaches (Compas et al. 2001). Coping skills are integral for developing *resilience*, which is defined as "The process of adapting well in the face of adversity, trauma, tragedy, threats or even significant sources of stress" (American Psychological Association 2023). In complex and challenging life events, resilient individuals can use their resources and coping mechanisms to adjust to internal and external demands (American Psychological Association 2023). Some academics suggest that existing definitions of resilience need more comprehension because multiple factors, such as individual, social, and cultural interactions, contribute to becoming resilient (Southwick et al. 2014).

As children and adolescents undergo rapid development, their coping and resilience may change (Kim-Cohen and Turkewitz 2012). In early childhood, emotional regulation results from interactions between the child and their parents, and then in early adolescence, peers and school play a significant role. Older adolescents can regulate their emotions independently as they become more aware of their own and others' emotions (Thompson and Goodman 2010).

There has been a growing interest in understanding how children develop coping skills, regulate emotions, and become resilient (Compas et al. 2017; Folkman and Moskowitz 2004; Hunter 2001; Kim-Cohen and Turkewitz 2012). Most studies on this issue have used self-reported measures of coping and emotional regulations and their relationships with internalizing and externalizing problems. While scholars have found it challenging to develop tools for other informants, parents and teachers would precisely report how children cope and regulate their emotions in certain situations (Compas et al. 2017).

A systematic literature review and meta-analysis of more than 200 studies involving over 80 thousand children and youth demonstrate that youth who have developed effective coping strategies for controlling their emotions show less internalizing and externalizing problems (Compas et al. 2017). In another study, Compas and colleagues suggest that emotional regulation and coping constructs should be studied together, as one's ability to regulate emotions is central to coping with stressful life events (Compas et al. 2014).

Some academics have qualitatively explored how adolescents perceive resilience in different socioeconomic and geographical settings (Hunter 2001; Nystad et al. 2014; Phillips et al. 2019). Adolescents generally perceive themselves as resilient, regardless of age, gender, or socioeconomic status (Hunter 2001). The more connected type of resilience is found in those with loving, caring families, supportive schools and communities, while the self-protective type is common among those who had to survive during their childhood (Hunter 2001; Nystad et al. 2014; Theron and van Rensburg 2018).

Research indicates that resilience can sometimes have adverse effects. Children must have resources such as closeness with their parents to become resilient. However, as children grow and become more independent, they may negatively perceive this closeness and attachment (Sherrieb et al. 2010; Southwick et al. 2014). Some studies suggest that adolescents who need to protect themselves and survive during childhood perceive resilience as more harmful than helpful (Hunter 2001; Southwick et al. 2014).

Academics highlight the importance of future studies to investigate complex coping and resilience mechanisms, essential components to overcome stress and adversities at early stages of life

(Compas 2006; Fisher et al. 2000). Therefore, understanding coping and resilience is necessary to implement interventions that would help young people cope effectively with stress, and achieve well-being and success in their lives despite challenging life events, such as parental migration.

### **1.2.3. Left-behind children**

Parents' migration affects children's physical and mental health, well-being, and education, and almost all areas of their lives (Cortes 2015; Fellmeth et al. 2018; International Organization for Migration 2023; Leskauskas et al. 2020; Mazzucato and Schans 2011; Račaitė et al. 2021). Most studies on this issue come from China, where parents migrate internally from rural to urban areas (Fellmeth et al. 2018; Wang et al. 2015b; Zhao and Yu 2016). Children of internal migrants may experience separation differently from those of international migrants. For example, children of overseas migrant workers may experience longer periods of separation. There is still a need to understand the health of children left-behind by international migrants.

#### **Left-behind children: general health**

Research investigating the general health of left-behind children includes common childhood illnesses, overweight or stunting, nutrition, immunisation, and injuries (Hu et al. 2018b; Lei et al. 2018; Mo et al. 2016; Tong et al. 2015). Some scholars have also investigated physical activity, healthy lifestyles, and unhealthy behaviours such as smoking and alcohol consumption (Jiang et al. 2015; Palos-Lucio et al. 2015; Yang et al. 2016).

Children of internally migrating parents are at an increased risk of stunting and wasting (Fellmeth et al. 2018; Račaitė et al. 2021; Yue et al. 2020). Those who need breastfeeding are less likely to be breastfed due to their mothers' absence (Ban et al. 2017; Robson et al. 2008). Grandparents are caregivers for most left-behind children in China. Caregivers can provide essential food; however, young people's nutrition needs are still not sufficiently met (Robson et al. 2008). Unlike children of rural-urban migrants, no significant differences are observed in nutrition outcomes between children of internationally migrant and non-migrant parents (Fellmeth et al. 2018).

Compared to their peers living with both parents, children of migrants in China are more likely to develop anaemia (Hipgrave et al. 2014; Robson et al. 2008; Zhou et al. 2015). In line with other Chinese studies on nutrition outcomes discussed above, the authors argue that children of migrants do not consume enough iron-rich food, resulting in iron deficiency (Hipgrave et al. 2014). Some scholars also found age differences; for example, younger children display worse general health and nutrition outcomes than adolescents (Zhou et al. 2015). Low socio-economic status and extreme poverty in rural China seem to be associated with poor nutrition and anaemia in these children (Hipgrave et al. 2014; Zhou et al. 2015).

Regarding vaccination coverage, available data shows that children of migrants are less likely to receive vaccination than children of non-migrants (Ni et al. 2017; Račaitė et al. 2021; Tang et al. 2016). Several factors, including the parenting style, household income and the primary caregivers' perception towards vaccination, seem to influence a children's vaccination status (Ni et al. 2017).

Studies investigating left-behind children's health behaviours (e.g. smoking and drinking alcohol) found incongruent results, with some reporting higher risks among left-behind children (Gao et al. 2010) and others showing no difference between children with or without migrant parents (Fellmeth et al. 2018). For example, Gao and colleagues suggest that left-behind children and adolescents in China are more likely to be physically inactive, addicted to computer games, and smoke/drink more than children of non-migrant parents (Gao et al. 2010). As for gender and health behaviour, left-behind boys are more likely to smoke and drink alcohol than left-behind girls (Gao et al. 2010; Sun et al. 2002). Children of migrant fathers are less likely to exhibit risky behaviour than children of migrant mothers; moreover, migration of fathers could even protect children from smoking in China (Gao et al. 2013). Overall, studies suggest that children with both migrant parents smoke more and drink more alcohol than those with only one migrant parent or non-migrant parents (Gao et al. 2013; Jiang et al. 2015; Yang et al. 2016).

Similar to the health behaviours among left-behind children, children of migrants are more likely than other children to sustain injuries, such as touching a sharp instrument, being struck by a person or object, or being bitten by an animal (Hu et al. 2018a; Shen et al. 2009).

The lack of public awareness and intervention programs to support children of immigrants and their transnational families may explain lower vaccination coverage, higher risky behaviour and injuries among left-behind children (Mao and Wu 2007; Tang et al. 2016). Again, most studies on this subject are from China, and more research from other low- and middle-income countries could provide better insights.

### **Left-behind children: mental health and well-being**

Substantial research has investigated left-behind children's mental health and well-being (Cortes 2015; Fellmeth et al. 2018; Wu et al. 2019). The most studied outcomes are loneliness, anxiety, depression, behavioural problems, relationship difficulties, aggression, and cognitive development (Fellmeth et al. 2018; Umami and Turnip 2019; Wu et al. 2019; Yang 2022). The studies primarily used standardised tools, such as strength and difficulties questionnaires, to measure mental health outcomes of left-behind children (Graham and Jordan 2011; Umami and Turnip 2019; Vanore et al. 2015). Only few qualitative studies are available on this topic (Lam and Yeoh 2019b; Rose-Clarke et al. 2022; Zhao et al. 2018).

Existing evidence, especially from China, demonstrates that children of migrants are at an increased risk of developing mental health disorders (Tang et al. 2018; Wu et al. 2019; Zhou et al. 2020). For example, some authors claim that Indonesian, Vietnamese and Filipino children of migrant parents experience more psychological distress than those from non-migrant households (Umami and Turnip 2019). A recent systematic literature review and meta-analysis of 111 studies, suggest that anxiety, depression, suicidal ideation, and conduct disorders are higher among children of migrants than those of non-migrants (Fellmeth et al. 2018). Over 85% of the studies included in this systematic review were conducted in China and may not accurately reflect the situation of left-behind children in other migrant-sending countries.

Parents' migration is not the only determining factor for children's mental health. Alongside the migratory separation, transnational family characteristics, caregiving practices, family functioning, relationships with family members and peers, and individual characteristics all seem to contribute to young people's well-being (Hu et al. 2018a; Wen and Lin 2012; Wu and Cebotari 2018).

Considerable research investigates the gender-differentiated effects of parental migration on left-behind children: that is, studying differences between mothers' and fathers' migration and how it affects child outcomes, as well as differences between left-behind girls and boys (Cortes 2015; Jampaklay and Vapattanawong 2013; Lam and Yeoh 2019a; Yue et al. 2020). Scholars suggest that mothers' migration negatively impacts early childhood development, whereby cognitive development is especially delayed (Jampaklay and Vapattanawong 2013; Yue et al. 2020). Children of migrant mothers also show higher psychological distress and emotional difficulties than children of migrant fathers or non-migrant parents in Thailand (Jampaklay and Vapattanawong 2013). Lam and colleagues emphasize that traditional gender roles in transnational families are shifting towards more equality in Southeast Asian countries such as Indonesia and the Philippines (Lam and Yeoh 2019a). For example, although traditionally, mothers are expected to be the primary caregivers for children, when they migrate, fathers remaining in the household take on more childcare duties, such as cooking and helping children with school homework (Lam and Yeoh 2019a).

As for the gender of a left-behind child, it seems to differ across countries and cultures. Some studies find worse educational and developmental outcomes among left-behind boys when compared to left-behind girls; the gap is even wider when mothers migrate (Bertrand and Pan 2013; Cortes 2015). Some scholars also suggest that regardless of migrant parents' gender, if a child has a supportive, loving family environment and emotional closeness with parents, their mental health, well-being and life satisfaction are not different from those growing up in non-migrant households (Cebotari et al. 2017).

Some academics took a more positive perspective, and rather than mental health disorders, investigated the well-being of left-behind children and compared results with their non-left-behind peers (Gassmann et al. 2018; Kharel et al. 2021; Ye et al. 2020). The authors have examined outcomes such as the multi-dimensional well-being index (Gassmann et al. 2018), life satisfaction (Wu and Cebotari 2018), child development (Cebotari et al. 2017) and subjective self-reported well-being (Ye et al. 2020).

To evaluate the well-being outcomes among children of migrants and non-migrants in Eastern European countries such as Moldova and Georgia, Gassmann and colleagues used six well-being

domains: physical health, household characteristics, education, child protection, communication and emotional health (Gassmann et al. 2018). The authors found non-differing well-being outcomes between left-behind and non-left-behind children in Moldova; in contrast, children of migrant parents showed better well-being in Georgia (Gassmann et al. 2018). The literature suggests that the impact of parental absence on children cannot be evaluated as negative or positive, it is a complex phenomenon, and many factors contribute to the well-being of young people (Michalos 2014).

Some academics suggest that children of migrants are less satisfied with life than those of non-migrants (Wang and Yao 2020; Wu and Cebotari 2018). At the same time, left-behind children who have a supportive environment are more likely to be satisfied with their life than those who grow-up in less supportive environments. Moreover, social support and feeling safe have been shown to mediate the adverse effects of loneliness (Liu et al. 2023; Wei 2015). In contrast, feeling insecure may lead children to psychological distress, anxiety or even depression (Chen and Chang 2012). To maintain well-being and life satisfaction, children of migrants need to feel safe and supported at home, in schools and in their communities.

Some researchers have also examined how child development relates to parental migration (Cebotari et al. 2017; Wen and Lin 2012; Yue et al. 2020). For example, Wen and Lin suggest that social context influences child development, regardless of the immigration status of their parent. However, it plays an even more critical role in the lives of left-behind children (Wen and Lin 2012). While child developmental outcomes are better in families with a supportive environment and sufficient resources, it tends to be delayed in transnational families with low socio-economic conditions (Wen and Lin 2012). Yue and colleagues suggest that the gender of the migrant parent plays a role, and mothers' migration is associated with worse cognitive development in children under five, especially children from six to 30 months are vulnerable in this respect (Yue et al. 2020). In line with this, other authors emphasize that children of migrant fathers living in caring family environments have similar developmental and well-being outcomes as children of non-migrant parents (Cebotari et al. 2017).

Notably, left-behind children's health is often assessed using adults' reports, primarily their parents or caregivers, which may not accurately reflect children's situation. Some academics claim

that adults perceive children differently; they tend to underestimate and underreport young people's emotional problems (Jordan and Graham 2012).

### **Left-behind children: coping and resilience**

Parental migration is a stressful life event that, in many cases, is unavoidable. Not all left-behind children experience the same stress level or are negatively affected by parental absence. Academics are increasingly interested in understanding why some children are more resilient and cope better than others with similar migratory separation experiences (Jordan and Graham 2012; Rose-Clarke et al. 2022; Wei 2015; Zhao et al. 2018). For this purpose, some scholars have investigated children's living environments, family characteristics, caregiving practices, and individual coping mechanisms (Asis 2006; Cui et al. 2021; Wei 2015).

The study by Asis suggests that Filipino left-behind children are better-off materially than those living with their parents (Asis 2006). When children are well-socialized and perceive their parents' absence as a way to ensure a better future for their families, they become resilient and cope well (Asis 2006). Unlike the Philippines, children in China appear to be more negatively affected by parental absence, making it difficult for them to cope. For example, a recent study by Cui and colleagues found that low self-esteem and lack of needed support lead left-behind children to psychological distress and negative coping (Cui et al. 2021). Rural Chinese left-behind children who experience loneliness and anxiety also show negative coping (Liao et al. 2014). In contrast, high self-esteem and social support moderate the adverse effects of migratory separation and help children to solve problems and cope well with their circumstances (Cui et al. 2021; Wei 2015).

Left-behind children's coping styles correlate with many factors, such as the transnational family's socio-economic conditions, social relationships and living environment (Liao et al. 2014; Wei 2015). Alongside these factors, children's age and parents' education seem to play a role. For example, Liao and colleagues found that, as children grow, they become more conscious of their emotions and can reflect and solve problems better (Liao et al. 2014); as a result, adolescents develop more positive coping capabilities than their younger counterparts. Children's coping skills also improve with parental education (Liao et al. 2014). At the same time, children who lack connections with their peers, family members and schoolteachers feel higher social anxiety,

leading them to loneliness; and those who feel lonely are more likely to develop a negative coping style (Erath et al. 2010; Liao et al. 2014).

To further expand on what was explained above, resilience is more complex than coping, and studying resilience, particularly in children who have experienced separation from their parents, requires more comprehensive viewpoints. Hence, along with coping, some academics have investigated how resilient left-behind children are and what factors contribute to their resilience (Dong et al. 2019; Jordan and Graham 2012; Rose-Clarke et al. 2022). For example, the systematic review by Dong and colleagues found that rural Chinese children of both migrant parents are less likely to be resilient than those with only one migrant parent; children who are separated from their parents for more than two years are also less likely to be resilient (Dong et al. 2019). On the other hand, another study revealed that children aged 9 to 11 who are left behind in Southeast Asia are less happy but become more resilient when the separation from their parents lasts longer (Jordan and Graham 2012), stressful life experiences such as parental absence seem to make these children more resilient.

Some resilience studies have investigated the association between the material benefits of parental migration and the resilience of left-behind children and found that children in economically better-off families are more resilient than those from relatively poor households (Jordan and Graham 2012; Parreñas 2001). Financial security and a suitable living environment contribute to better well-being in Filipino families. In contrast, financial insecurity and chronic poverty make transnational families, particularly left-behind children, less happy and resilient (Parreñas 2001).

Most researchers studying resilience in left-behind children employ a quantitative cross-sectional study design. However, few qualitative studies explored this issue in China and Thailand. For example, Zhao and colleagues emphasize that prolonged separation from parents increases Chinese children's psychological distress, which in turn makes it challenging for children to be resilient (Zhao et al. 2018). The resilience of Thai left-behind children seems to be somewhat different from those in China. Another qualitative study identified emotional closeness, financial security, and guidance as critical resources for child resilience (Rose-Clarke et al. 2022).

### **1.3. Country of origin – left-behind children in Georgia**

Although Georgia is one of the migrant-sending countries in Eastern Europe, where thousands of children are left in the care of extended family members, research on the impact of migratory separation on children is scarce. Existing data originate from one project, “*Migration, Children and the Elderly Left Behind in Moldova and Georgia*” (CELB-MD/GE) conducted in 2011-2012 (Cebotari et al. 2016; Cebotari et al. 2018b; Gassmann et al. 2018; Vanore 2016). In the survey, caregivers from transnational households reported on child well-being, health, and education.

The cross-sectional study by Cebotari and colleagues examined child health in the context of caregiving practices and other demographic characteristics (Cebotari et al. 2018b). The authors found better health outcomes among children of migrants than those of non-migrants. Compared to children of migrant mothers, caregivers also reported better health outcomes among those of migrant fathers whose primary caregivers were mothers (Cebotari et al. 2018b).

In another study, Varone measured the psychological well-being of left-behind children using the standardised Strength and Difficulties Questionnaire (SDQ) (Vanore 2016). The author found that children of migrant and non-migrant parents report similar mental health outcomes. Unlike the study of Cebotari and colleagues (Cebotari et al. 2018b), the results remain the same regardless of which parent migrated.

Another group of researchers examined Georgian left-behind children’s multi-dimensional well-being using the same nationally representative survey data mentioned above (CELB-MD/GE). The authors acknowledged that well-being is a complex notion and challenging to measure in the survey (Gassmann et al. 2018). The study suggested that children of migrants are more likely to have better overall multi-dimensional well-being than their peers from non-migrant households (Gassmann et al. 2018).

Notably, all four studies described above are cross-sectional and analyse one survey data involving caregivers of left-behind children; therefore, findings may not accurately reflect the actual situation.

Promoting and improving children's health is one of the main targets of the Ministry of Health and the National Center for Disease Control and Public Health (NCDC 2020). The State Commission on Migration Issues (SCMI 2023) is another organisation focusing on migration issues, including the health of those affected by human mobility in Georgia. Despite the efforts made, the needs of Georgian children, especially those affected by parental outmigration, are not sufficiently met. Following the rise of labour migration, recent data from the National Statistics Office of Georgia (GEOSTAT 2022) documents that the prevalence of mental health disorders in children aged 1 to 14 increased from 0.4 in 2010 to 3.0 per 100,000 children in 2021; adolescents and adults have an almost five-time increase.

Since 2015, the State Commission on Migration Issues in Georgia emphasizes the need for research, especially on migration and health issues (SCMI, 2015). However, how migration affects children have yet to be addressed in Georgia.

Overall, existing international literature shows the following gaps: in many low and middle-income countries, children live in a complex care arrangement, transnational family characteristics and cultural differences, such as caregiving practices, are not fully considered in some research projects; particularly qualitative data is lacking and longitudinal and mixed method studies on this topic are almost non-existent. Most of the evidence comes from descriptive, quantitative research. Existing studies frequently rely on caregivers' reports on children and use various tools to measure physical health, mental health, and related well-being outcomes, which makes comparisons challenging.

## 1.4. Objectives

This study aims to identify the health and well-being needs of left-behind children in Georgia. Involving children from both migrant and non-migrant parents as well as teachers will allow the subject to be studied from different perspectives. This research is expected to bring left-behind children to the attention of policymakers and organizations operating around child well-being issues. Identifying feasible and effective strategies is crucial to mitigate and prevent possible negative impacts of migratory separation on children.

Specific objectives:

- (i) To examine the impact of international parental migration on the mental health and well-being of left-behind children through a systematic review of the literature
- (ii) To explore schoolteachers' perceptions and perspectives on parental migration and left-behind children in Georgia with qualitative interviews
- (iii) To assess parental labour migration effects on children's mental well-being and to identify the needs of Georgian left-behind children by conducting a school survey with school children (students)
- (iv) To explore children's experience and feelings about their parent(s)' migration; children's perception in terms of their health and mental well-being status, coping and resilience by using an in-depth qualitative interviews with left-behind and non-left-behind children in schools.

## 2. MATERIALS AND METHODS

This chapter first gives an overview of the mixed methods study design, the development of mixed methods research, its definition and motivation for applying this method, philosophical assumptions, and theoretical frameworks underpinning this study. The sections below illustrate the quantitative and qualitative approaches used in this study. Subchapters 2.2 (Antia et al. 2020), 2.3 (Antia et al. 2022), and 2.4 (Antia et al. 2023) describe the methodology of the studies published in peer-reviewed journals.

The general study design is based on the standard textbook of (Creswell and Clark 2017) and complemented with other methodological literature (Creswell et al. 2011; Curry and Nunez-Smith 2014; Guetterman et al. 2015).

### 2.1. A mixed methods study design

The first applications of *mixed methods* research come from sociology (Brewer and Hunter 1989), medicine (Crabtree 1999), education (Creswell 1994), and nursing (Morse 1991). The complexity of the research questions was the primary motivation for the scientists to merge multiple methods. Alongside the development of mixed methods research, its definitions have changed. In health research, the most commonly used definition comes from Tashakkori and Creswell, according to whom, “Mixed methods research is a research in which the investigator collects and analyses data, integrates the findings, and draws inferences using both qualitative and quantitative approaches or methods in a single study or a program of inquiry” (Tashakkori and Creswell 2007). Even though methodological experts agree that mixed methods research will continue to evolve in future, the critical element of it remains the same: mixing at least one quantitative and qualitative method to answer one main research question (Hesse-Biber and Johnson 2015).

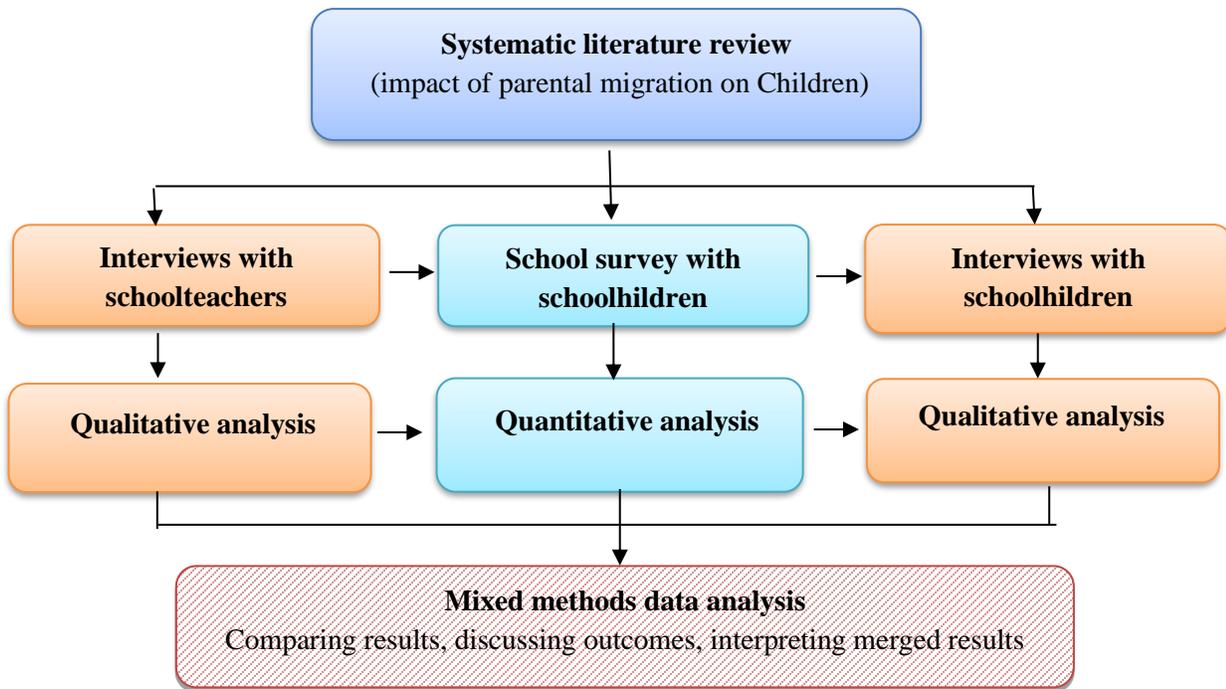
Mixed methods research is a complex process. It is challenging to categorize and provide procedures for researchers to follow in a mixed methods study. Methodological experts recognize its uniqueness and suggest that “every mixed methods study has its own design”; however, several

classifications are available to guide scientists working on mixed methods research (Creswell and Clark 2017). *Sequential* and *convergent* (or concurrent triangulation) are the most used terms for mixed methods design.

In this research, I apply a multimethod design incorporating elements of sequential and convergent mixed methods designs. The central idea of integrating quantitative and qualitative approaches is to understand better how parental labour migration affects left-behind children in Georgia.

The study starts with a systematic literature review of the existing evidence on children of migrant parents, followed by a qualitative study with schoolteachers. The systematic literature review and qualitative study findings inform further research involving children: quantitative school survey using a self-reported questionnaire and qualitative interviews with schoolchildren. Figure 2. shows the general outline of the study process.

The philosophical assumption of pragmatism and theoretical frameworks: a conceptual model of family stress (Malia 2006) and resilience theory (Masten et al. 2021; Wang et al. 2015a) underpin this study. Each will be discussed below in respective sections.



**Figure 2.** Procedural diagram for the mixed methods study design leading to the results

## **2.2. Impact of international migration on the mental health and well-being of left-behind children (systematic literature review)**

The systematic literature review was conducted as the first phase of the mixed methods study. It corresponds to study objective (i) investigating the mental health and well-being effects of international parental migration on left-behind children.

### **2.2.1. Search strategy**

This study is conducted following the principles of Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) (Liberati et al. 2009).

Studies addressing left-behind children's mental health and well-being outcomes were searched through the following databases: PubMed, Web of Science, PsychINFO, Cochrane Library and Google Scholar. Relevant studies were identified using broad search terms such as (international migration OR transnational families OR left-behind) AND children AND (health OR well-being OR education). This search string was applied to all databases, and the results were screened against inclusion and exclusion criteria. Since the number of hits in Google Scholar exceeded 100 thousand, after the first 200 retrieved results, stepwise, 50 hits were screened until no other relevant results were identified. In addition to scientific databases, this study included the grey literature (GreyList 2020; OpenGrey 2020) and manual screening of reference lists (from included articles).

#### **Inclusion criteria:**

- Studies focusing on children with at least one parent who has been an international migrant worker for at least six months continuously.
- Quantitative studies measuring mental health and mental well-being-related outcomes.

#### **Exclusion criteria:**

- Studies with no control groups, case reports, conference papers, or editorials.
- Qualitative studies.
- Studies examining internal rural-urban migration.

- Studies with physical health outcomes, education, or other outcomes not related to mental health and well-being.
- Studies including adult participants.

### **2.2.2. Data extraction**

This study modified the Effective Practice and Organization of Care (EPOC) data collection form to extract data from the included studies (Cochrane 2017). The form included the following items: publication date, country, study design, aim, sampling technique (e.g., random or convenience), data collection date, sample size, age group, exposure and outcome variables, type of outcome measurement, statistical methods used, control group (yes/no), results, key conclusions, limitations, recommendations.

### **2.2.3. Quality assessment and risk of bias**

The quality of included studies was assessed using the National Heart Lung and Blood Institute (NIH 2020) tools. As the studies used various designs, the following quality assessment forms of NIH were used: 1. Quality Assessment of Systematic Reviews and Meta-Analysis, 2. Quality Assessment tool for Observational Cohort and Cross-Sectional Studies, and 3. Quality Assessment of Case-Control Studies. Each NIH tool has 15-18 criteria/questions evaluated as Yes, No or Other (CD-cannot determine, NA-not applicable; NR-not reported). Based on these answers, studies were evaluated as good, fair or poor. NIH Assessment questions ask details about sample selection and size, response rate, participant characteristics, reporting, exposure and outcome measures, statistical analysis, and confounding variables.

The risk of bias in included articles followed the quality assessment. Studies with less than 50% of the total quality assessment score were categorized as a high risk of bias, between 50-70% as a moderate risk of bias and studies above 70% as a low risk of bias.

### **2.2.4. Analysis**

In this study, included articles were analysed based on their design, geographical location (countries from where transnational families originate), outcome measures, statistical analysis, gender of migrant parent and gender of the left-behind child. The results from different studies

were compared for the most frequently used mental health outcome measures, such as Strength and Difficulties Questionnaire (SDQ) scores and Total Difficulties Scores (TDS). SDQ is one of the most commonly used standardized tools for children, adolescents, their parents and teachers to evaluate the psychological health outcomes of children aged 2-17 (Goodman 1997). It has been translated into almost 100 languages and is freely available for download (YouthinMind 2023). SDQ has five main domains, each consisting of five items. The total SDQ score, known as TDS, is calculated by summing up four domains: emotional symptoms, conduct problems, hyperactivity and peer relationship. Prosocial behaviour is another domain included in the SDQ (Goodman et al. 2000).

Statistical computing software R (version 3.5, R Core Team) was used to calculate means, fractions, odds ratios, and their confidence intervals from SDQ and TDS mean scores reported in different studies.

### **2.3. Schoolteachers' perceptions of labour migration and left-behind children (qualitative study)**

The systematic literature review (objective i.) findings informed this qualitative study, which corresponds to study objective (ii) exploring schoolteachers' perceptions and perspectives on parental migration and left-behind children in Georgia.

#### **2.3.1. Theoretical framework**

The family stress model is a theoretical framework of this study. In the conceptual model, *family stress* is defined as “disturbance in the steady state of the family system”, which can be caused by external events such as war, an internal event such as conflicts within the family, or a combination of both (Boss 2002). When stress happens in the family, it affects all members in more complicated ways than individual-level stress; family structure and functioning change, and eventually, the family loses balance (Malia 2006). Family members' out-migration is a family-level decision affecting all members. Therefore, in this study, I consider parents' out-migration as a stressor that may change the family's functioning. Children may be particularly vulnerable when families experience stressful life events, such as migratory separation. The conceptual model of family

stress informed the interview guides and analysis of collected data to understand better how teachers perceive parental migration and transnational families in Georgia.

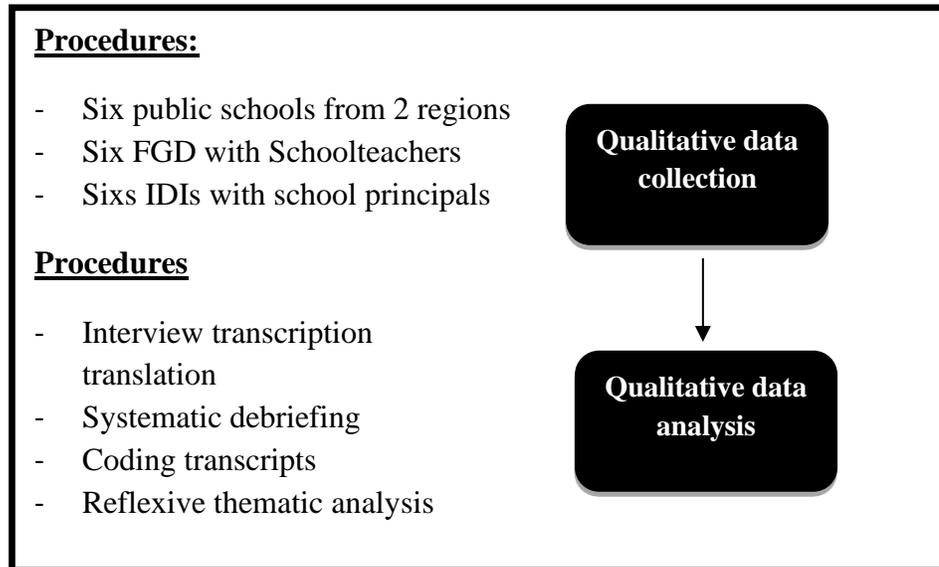
### **2.3.2. Study setting and sampling**

To collect data, I purposively selected Georgia's relatively high-out migration regions: Samegrelo Zemo-Svaneti and Guria (as no official statistics are available in the country, migration rates are estimated). Samegrelo Zemo-Svaneti, located in the north-western part, bordered by the black sea, Abkhazia, and the Russian Federation, is the second-largest region (population 301 000) of Georgia (Administration of the State Representative 2023). The Guria region (population 140 000) borders the Samegrelo Zemo-Svaneti from the north (Administration of State Representative 2023). To equally represent urban and rural schools, I have selected three public schools in each region (six schools in total). To capture teachers' perspectives on different transnational families, school size and estimated percentages of left-behind children in each participating school also varied (number of students from 38 to 478; percentage of left-behind children from 15 to 50%). I have conducted in-depth interviews (IDIs) with principals and a focus group discussion (FGD) with seven to twelve teachers in selected schools (six IDIs and six FGDs in total). All teachers invited to the FGDs were class tutors. The motivation to target tutors was their responsibility to guide the class throughout the academic year, to communicate with students, their parents, and caregivers, and to help schoolchildren resolve academic and personal challenges. In Georgia, it is typical for teachers to undertake the additional duty of acting as tutors for their classes.

### **2.3.3. Data collection**

Data collection took place from October to December 2019. I first contacted selected school principals and obtained their consent for conducting interviews in their schools; all principals gave their written consent. As for the focus groups, the principals invited all class tutors in each school. At the meeting, I explained to tutors the purpose and procedure of the study, clarified their questions, distributed study information and informed consent forms, and arranged a date for the focus group discussion. IDIs and FGDs took place in each school around seven to ten days after the initial meeting. Not all tutors were available during the interviews; this study included all who expressed their willingness and provided a signed agreement were included. Each IDI with principals took 35-45 minutes, while each FGD lasted about 50-90 minutes. All interviews and

FGDs were conducted after regular school hours and in the classroom, to which only the interviewer and the participants had access. Figure 3. illustrates data collection and data analysis procedures.



**Figure 3.** Qualitative study with schoolteachers, data collection and analysis procedures

Semi-structured interviews and FGDs were conducted in Georgian, the native (and official) language of all school personnel (and the interviewer). I obtained consent to audio-record the interviews, transcribed them in Georgian and translated them into English.

Central questions of the IDIs with principals were: how do school personnel and principals perceive the effects of parental migration on schoolchildren? What measures (if any) does the school administration take to support left-behind children? What do principals see as needs for left-behind children and their transnational families?

In the FGDs, participants were asked to discuss the school life of left-behind children, their academic performance, behaviour, mood, emotions, physical health, and relationships with classmates, teachers, parents, or caregivers; left-behind children's experiences with their parent's migration; perceptions about transnational families in their settings; their attitudes and actions in support of left-behind children and their families.

#### **2.3.4. Data analysis**

Main themes and sub-themes from collected data were identified by reflexive thematic analysis (Braun and Clarke 2019; Clarke et al. 2015). The reflexive thematic analysis allows flexibility and systematic data coding to identify complex issues at a deeper level (Braun and Clarke 2019).

The data analyses process included: (i) getting familiar with collected data (transcripts, field notes, reflexive notes); (ii) coding interviews multiple times using qualitative data analysis computer software Nvivo 12, QSR International (predominantly inductive coding, additional deductive coding was based on the interview transcripts); (iii) identifying main themes and sub-themes and (iv) conceptualising the analytic narrative. The first coding cycle was primarily descriptive. After several cycles, codes became more analytic and led to identifying some themes that were not obvious initially (e.g. the complex relationships between school personnel and parents/caregivers). After systematically coding transcripts, I grouped and regrouped codes and identified initial themes. Reviewing and analysing initial themes led to the identification of the main and sub-themes of the study.

This research adhered to the Consolidated Criteria for Reporting Qualitative Studies (COREQ) principles (Tong et al. 2007). The primary aim of the COREQ is to ensure that all details are provided concerning the design, methodologies, data gathering, and analytical procedures of qualitative study, enabling readers to evaluate the quality and trustworthiness of the study findings.

#### **2.4. Left-behind children's self-reported emotional and behavioural problems (quantitative school survey)**

The findings of the qualitative study with schoolteachers informed this quantitative school survey with children, corresponding to study objective (iii) assessing parental labour migration effects on children's mental well-being, and identifying the needs of Georgian left-behind children.

### **2.4.1. Study setting and sampling**

Similar to the qualitative study with schoolteachers, I purposively selected public schools from the second largest region of Georgia, the Samegrelo-Zemo Svaneti. The initially planned school randomization was not possible due to the COVID-19 pandemic-related partial school closures. To allow for the equal participation of children from different areas, both rural and urban public schools with less than 100 to more than 1000 students were selected. In total, I invited 22 public schools; however, three schools could not participate because COVID-19 cases increased, and they had to close during the data collection period. One school principal refused to participate. Most schools in the country are public and offer twelve grades of general education.

In this study, I selected 12 to 18-year-olds. In each public school, all students enrolled in grades VII-XII were invited to participate, regardless of their parental migration status. Including all students in the classroom allowed comparing the results of left-behind adolescents to their non-left-behind classmates.

### **2.4.2. Data collection**

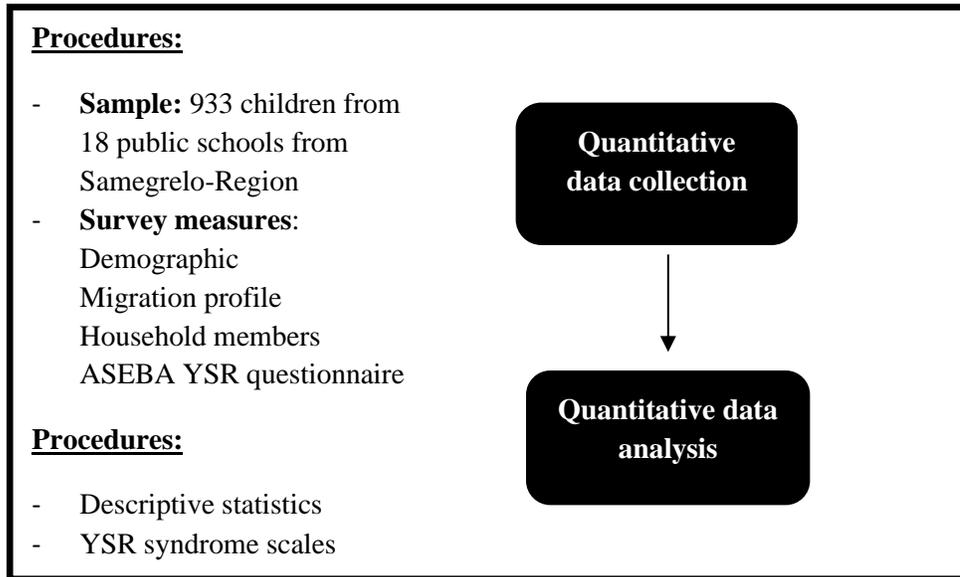
Data collection took place from October 2021 to January 2022. After receiving consent from selected school principals, I asked for the initial meeting with class tutors. The principals invited VII-XII grade class tutors. In this meeting, I explained to the tutors the purpose and procedures of the study and asked for their support.

School tutors assisted during data collection in the following:

- Arranging meetings with students and their parents.
- Distributing study information and informed consent forms.
- Collecting signed consent forms.
- Arranging and reminding students about the survey date and allocating classrooms for the survey.

At the meeting with students, I introduced the study and its purpose, answered questions and (with tutors' assistance) distributed study information and informed consent forms. Class tutors communicated with the parents. Students were asked to take forms home, reread them and, in

case of agreement, provide their and parents/caregivers' written agreement within a week. In each school, the survey took place around one to two weeks after distributing the consent forms. Figure 4 details the quantitative data collection and analysis procedures.



**Figure 4.** Quantitative survey with schoolchildren, data collection and analysis procedures

Each survey took place in the classroom, during or after regular school hours. Only students who signed the written agreement forms (with their parents/caregivers) completed survey questionnaires. Two data collectors were present in each classroom (research assistant Marika Antia and a main researcher – Khatia Antia). Only participants and data collectors had access to the classroom.

The survey started with distributing paper questionnaires and explaining how to complete them. Students could ask clarifying questions at the beginning and during the process. The survey was anonymous (codes were applied to schools and classrooms, and a running number to each student). Students were reminded not to write their names on the survey papers. Each survey lasted 30-50 minutes.

## Survey questionnaires - Youth Self-Report

The main survey questionnaire was the Achenbach's System of Empirically Based Assessment (ASEBA) tools, namely the Youth Self Report (YSR) (Achenbach 1994). YSR, developed for youth aged 11-18, is a self-reported measure of emotional and behavioural problems (Achenback and Rescorla 2001). The YSR groups adolescents' emotional and behavioural problems into two broadband scales: *Internalizing* and *externalizing*. The YSR is translated into over 100 languages and is used in many countries as a highly reliable and valid instrument (Deighton et al. 2014).

The YSR consists of 117 items (103 are problem items, and 14 are socially desirable items), each scored: 0 = not true, 1= somewhat true 2=very true/often true. Problem items are grouped into eight *syndrome scales* and *other problems*. Table A7 (in the appendices) illustrates YSR empirical syndrome scales and individual items composing each scale.

Primary outcome measures in this study are YSR empirical syndrome scales and broadband internalizing and externalizing. Table 1. shows the computation of each scale.

**Table 1.** Youth Self Report (YSR) broad-band scale scores, total problem score, computation

Source: (Antia et al. 2023)

Broad-band Scale	Syndrome	Computation
<b>Internalizing (a)</b>	Syndrome I (Anxious/depressed) Syndrome II (Withdrawn/depressed) Syndrome III (Somatic Complains)	a= scale I + II+ III
<b>Externalizing (b)</b>	Syndrome VII (Rule-breaking behaviour) Syndrome VIII (Aggressive behaviour)	b= scale VII + VIII
<b>Other (c)</b>	Syndrome IV (Social problems) Syndrome V (Thought problems) Syndrome VI (Attention Problems) Other problems	c= scale IV + V+ VI + other problems
<b>Total problem score:</b>	Internalizing Externalizing Other	Total = (a)+(b)+(c)

For countries with nationally representative YSR surveys, the ASEBA team conducted multicultural scoring of YSR problem scales (Achenback and Rescorla 2001). The scoring resulted

in categorizing countries into three main groups, where group 1 represents societies with the lowest, and group 3 with the highest total mean scores. For countries without a norm score, such as Georgia, the ASEBA recommends its standard as a reference. The ASEBA Standard is a default norm of the US adolescent population and represents Group 2 (the societies with the medium mean total problems scores) (Achenbach and Rescorla 2007). As no data is available on Georgia, this study used ASEBA standard group 2 for comparison.

The YSR Georgian translation was obtained from the ASEBA, licence N2186-10-06-20.

### **Additional demographic questionnaire**

An additional demographic questionnaire was distributed with YSR forms to obtain demographic information such as household composition, the number of siblings, and parent's migration-related questions; for left-behind adolescents: duration of parent's migration; mode and frequency of online communication with migrant parent; frequency of parent's visit. This paper-based questionnaire was distributed together with YSR forms. Left-behind adolescents also answered questions on the duration of the parent's migration, the mode and frequency of online communication and the frequency of parent visits.

### **2.4.3. Statistical analysis**

#### **YSR empirical and broadband syndrome scales, comparison with ASEBA Standard**

After completing the survey, I created electronic versions of the YSR and additional questionnaires in EpiData Manager version 2.01, then entered all individual paper-based responses using EpiData Entry version 2.01. While *EpiData Manager* is a software that enables labelling and defining variables, recording and exporting data for analysis, *EpiData Entry* is used for entering individual responses and exporting them to Stata or other statistical data analysis packages (EpiData Association 2022). After completing the data entry, I exported the EpiData file to Stata version 15 for further analysis.

Data analysis started with categorizing variables, generating new variables, and calculating mean scores for each YSR empirical syndrome scale. In the next step, YSR syndrome scores (eight problem items) and broadband internalizing/externalizing problem scores were compared

separately between adolescent boys and girls; then, mean scores obtained in this study sample were compared to the ASEBA normative sample (Standard group 2). I additionally performed a subgroup analysis and compared YSR mean scores between left-behind and non-left-behind adolescents. For comparing the mean scores, I used a two-sample t-test, which allows for testing the hypothesis if the two means are not equal.

### **Bivariable and multiple linear regression**

For statistical analysis, I used Stata IC 15, and considered  $p < 0.05$  as significant.

After descriptive statistics and comparing means, the next step was modelling the above-explained YSR broadband scales, internalizing and externalizing using bivariable and multiple linear regression. Again, analysis was performed separately for boys and girls. Main aim to perform linear regression was to identify factors (including parental migration) associated with internalizing and externalizing among girls and boys.

All independent variables of YSR are categorical, therefore, to evaluate the relationship between variables, I calculated Spearman's rank correlation coefficient (Spearman's  $\rho$ ).

**Independent variables included in the analysis:** gender, age group (12-13, 14-15, 16-18), performing in any sports, number of siblings, doing chores, having an illness, number of close friends, having school problems, living with (mother only, father only or both parents), relationships with peers (compared to peers), relationships with siblings, relationships with parents. Parental migration was another independent variable examined in this study. I categorized children as *left-behind* if they answered *yes* to *having at least one migrating parent* and *non-left behind* if they answered *none of my parents is migrants* to the same question.

After Spearman's  $\rho$ -correlations, I performed linear regression analyses.

The linear regression method measures the strength of linear association for the numerical exposure and outcome to observe how outcome variable changes in relation to the independent variable (Kirkwood and Sterne 2010, pg. 87-92). Since the broadband scales: internalizing and externalizing are numerical (a higher score indicates a greater problem), and the YSR scores are normally distributed (Achenback and Rescorla 2001), this method is selected for the analysis.

*Bivariable* (also known as simple) linear regression includes one exposure and one outcome variable; a straight line describes the changes (increase or decrease) of the outcome (dependent variable)  $y$  when the exposure (independent variable)  $x$  increases; and is calculated with the formula:

$$y = \beta_0 + \beta_1 x + e$$

$\beta_0$  and  $\beta_1$  represent parameters in linear regression.  $\beta_0$  is the intercept (predicted value of  $y$ , if the  $x=0$ ),  $\beta_1$  is a regression coefficient, showing the change of  $y$  in relation to the increase of  $x$ ;  $e$  is an error of the estimate (Agresti and Finlay 2009, pg. 268-274).

*Multiple* linear regression is a method used to measure the strength of association between multiple independent variables in relation to one numerical dependent variable. The equation is:

$$y = \beta_0 + \beta_1 x_1 + I + \beta_n x_n + e$$

In this formula,  $\beta_1 x_1$  represent the regression coefficient ( $\beta_1$ ) of the first exposure variable ( $x_1$ ), while  $\beta_n x_n$  is the regression coefficient of the last exposure variable (Agresti and Finlay 2009, pg. 268-274).

All independent variables of YSR were included in the bivariable linear regression. The outcome variables of the analyses were: broadband internalizing and externalizing for girls and boys separately. Analyses ended with a collinearity check and multiple linear regression, including all independent variables listed above.

## **2.5. Left-behind children's experience, coping with migratory separation and resilience (qualitative study)**

The qualitative study with left-behind schoolchildren is the final component of this mixed methods research, corresponding to objective (iv) exploring children's experience and feelings about their parent(s)' migration, children's perception of their health and mental well-being status, and their coping and resilience.

### **2.5.1. Theoretical framework**

Resilience theory underpins this study, according to which compensatory, protective, and inoculation models are central to developing resilience. At the same time, assets and resources are the primary resilience-promoting factors, helping children to cope with stressful life events, such as migratory separation from parents (Wang et al. 2015a). The theory suggests that resilience is crucial for children and adolescents *at risk*, meaning those who experience childhood trauma or other stressful life events (Masten et al. 2021; Rose-Clarke et al. 2022). The theory is used more frequently in child and adolescent mental health research (Masten et al. 2021; Wang et al. 2015a).

In this study, I consider left-behind children *at risk* and parent migration a *stressful life event* that may increase left-behind children's risk of developing emotional and behavioural difficulties.

### **2.5.2. Study setting and sampling**

Left-behind children who participated in the interviews were from one of the public schools (also took part in the school survey) in the Samegrelo-Zemo Svaneti region. An urban public school with up to 500 students in grades I-XII, the selected school is typical of the many public schools in Georgia. Around 250 students in grades VII-XII were enrolled at the time of data collection.

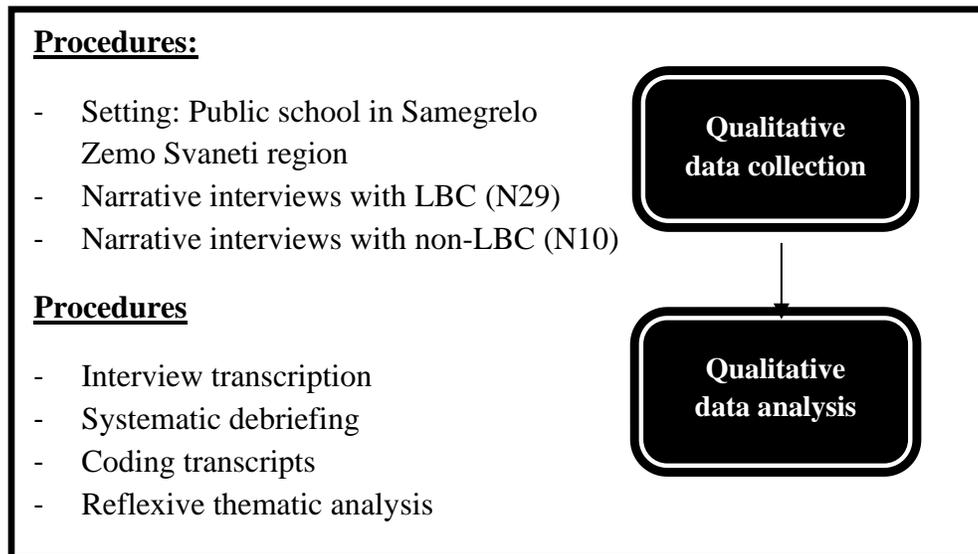
Study participants were adolescents aged 12-18 (VII-XII grade) whose parents had migrated and their classmates who lived with both parents (reference group). In this study, the *term left-behind* refers to adolescents whose parents have been labour migrants for at least three months within the past twelve months (when the data was collected). Comparatively, I refer to adolescents without migrant parents as *non-left-behind*.

### **2.5.3. Data collection**

Data collection took place between December 2021 and January 2022. The first step was to contact the selected school's principal to obtain an agreement on data collection and then arrange a meeting with class tutors (to obtain information about left-behind adolescents). I distributed study information and informed consent forms to adolescents and their parents/caregivers through class tutors.

A written agreement was obtained from students and their parents/caregivers. Class tutors were involved in scheduling interviews (during and after regular school hours). I conducted interviews in a classroom accessible only to the participant, the interviewer, and the research assistant.

All adolescents and the data collection team, the research assistant and I, spoke Georgian, a native language for all. Interviews lasted between 60 and 90 minutes each. In addition to taking reflexive notes daily, I performed systematic debriefing with the research assistant. A systematic debriefing is a thorough discussion following the data collection and leads to improved data quality (McMahon and Winch 2018). All participants agreed on the interview’s audio recording. During and after data collection, I transcribed all interviews. Figure 5. illustrates the data collection and analysis principles.



**Figure 5.** Qualitative study with schoolteachers, data collection and analysis procedures

In this study, I used *narrative interviewing*, which is defined as a “setting that encourages and stimulates an informant to tell a story about some significant event in their life and social context” (Bauer and Gaskell 2000). In the narrative interviewing style, the interviewer carefully listens to the story without interjecting and then reconstructs it from the informant’s point of view (Anderson and Kirkpatrick 2016).

At the beginning of the interview, I explained the following to each participant: “I am interested in learning about your life, from where you were a child, to how you interacted with your siblings and parents, to what it was like to start school, to whom you play, your friendships, and the migration of your parents. If you are willing to share your life story with me, please do so. I will listen to your life story”. An additional semi-structured in-depth interview guide was prepared for children who may feel uncomfortable sharing their life stories and prefer specific questions. Interview questions addressed the following topics: family composition, relationships with family members and friends, school life, perception of physical health, mental health and well-being, migration experiences of parents (before, during and after migration), stress management and resilience, school life, academic performance, COVID-19 pandemic and life-experience, perceptions of the future.

#### **2.5.4. Data analysis**

Similar to the above-described qualitative study with schoolteachers, this study utilized a reflexive thematic analysis (Clarke et al. 2015). Following the principles of reflexive analysis (Braun and Clarke 2019), I coded the same transcripts repeatedly, primarily using inductive coding, which enables identifying patterns, themes, and categories in the data without using pre-defined codes. Systematic coding, reviewing, and analysing the initial themes led to the final main and sub-themes of the study.

This study was conducted and reported according to the principles of the Consolidated Criteria for Reporting Qualitative Studies (COREQ) (Tong et al. 2007).

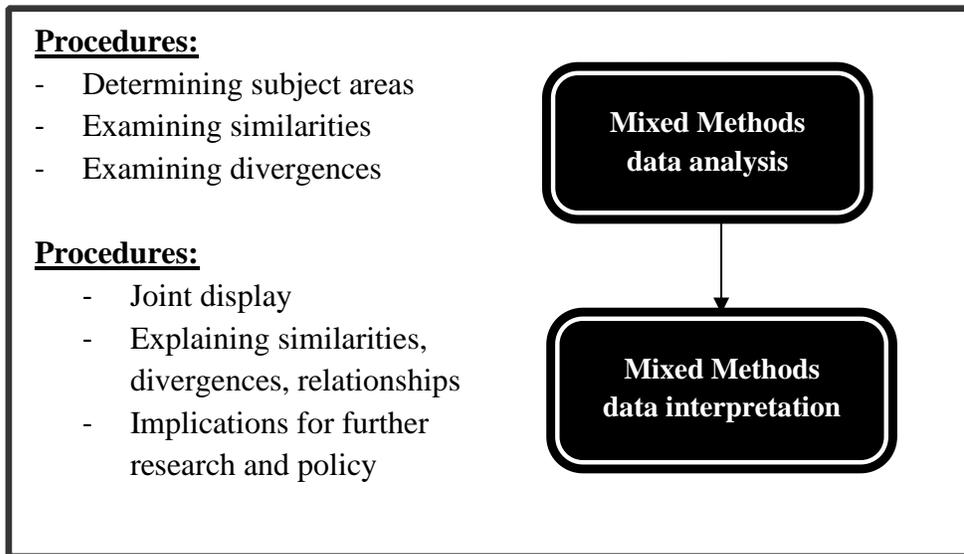
#### **2.6. Mixed methods analysis**

Integrating quantitative and qualitative data is central to a mixed methods study (Guetterman et al. 2015). Bryman describes integration as a process to “produce a whole greater than the sum of the individual qualitative and quantitative parts” (Bryman 2007).

Below figure 6 illustrates mixed methods data analysis procedures

I applied the following strategies to integrate the results from individual quantitative and qualitative studies: (Creswell and Clark 2017, pg. 135-142)

- (i) **Determining the subject areas** covered by each dataset (e.g., quantitative: left-behind children’s relationships with parents, peers, classmates, and YSR emotional and behavioural difficulties scores, and qualitative: teachers’ and children’s experience of migratory separation) and comparing, contrasting, and summarising the findings.
- (ii) **Examining similarities and differences** across datasets. (Creswell and Clark 2017, pg. 135-142)



**Figure 6.** Mixed methods data analysis procedures

Following the principals of Gutterman and colleagues, I interpreted the synthesized data in two ways: (Gutterman et al. 2015)

- (i) The results section concludes with the joint display table (Table 17), which shows the main results of each study component, and synthesized results.
- (ii) In the discussion section, each study’s findings are followed by the discussion of integrated results.

## **2.7. Ethical considerations**

To ensure that the mixed methods study is conducted according to the relevant guidelines and regulations of the Declaration of Helsinki, the study received ethics clearance from the ethics committees in both Germany and Georgia. The below section describes ethical considerations for each study objective.

**The systematic review of the literature (i)** – this study did not include collecting primary data or analysing secondary data of individual participants, and therefore no ethics clearance was required.

**A qualitative study with schoolteachers and principals (ii)** – the study was approved by the ethics committee of the Medical Faculty of Heidelberg University N-S-652/2019. The Ministry of Education of Georgia also agreed on data collection in public schools.

**School Survey and qualitative interviews with Schoolchildren (iii-iv)** – the study was approved by the ethics committee of the Medical Faculty of Heidelberg University N- S-160/2021, by the Ethics committee of the University of Georgia N-11-12401. Additionally, the Ministry of Education of Georgia was informed about the planned data collection activities in public schools. For the school survey, Youth Self Report (YSR) questionnaire licence (N2186-10-06-20) was obtained from ASEBA.

### **3. RESULTS**

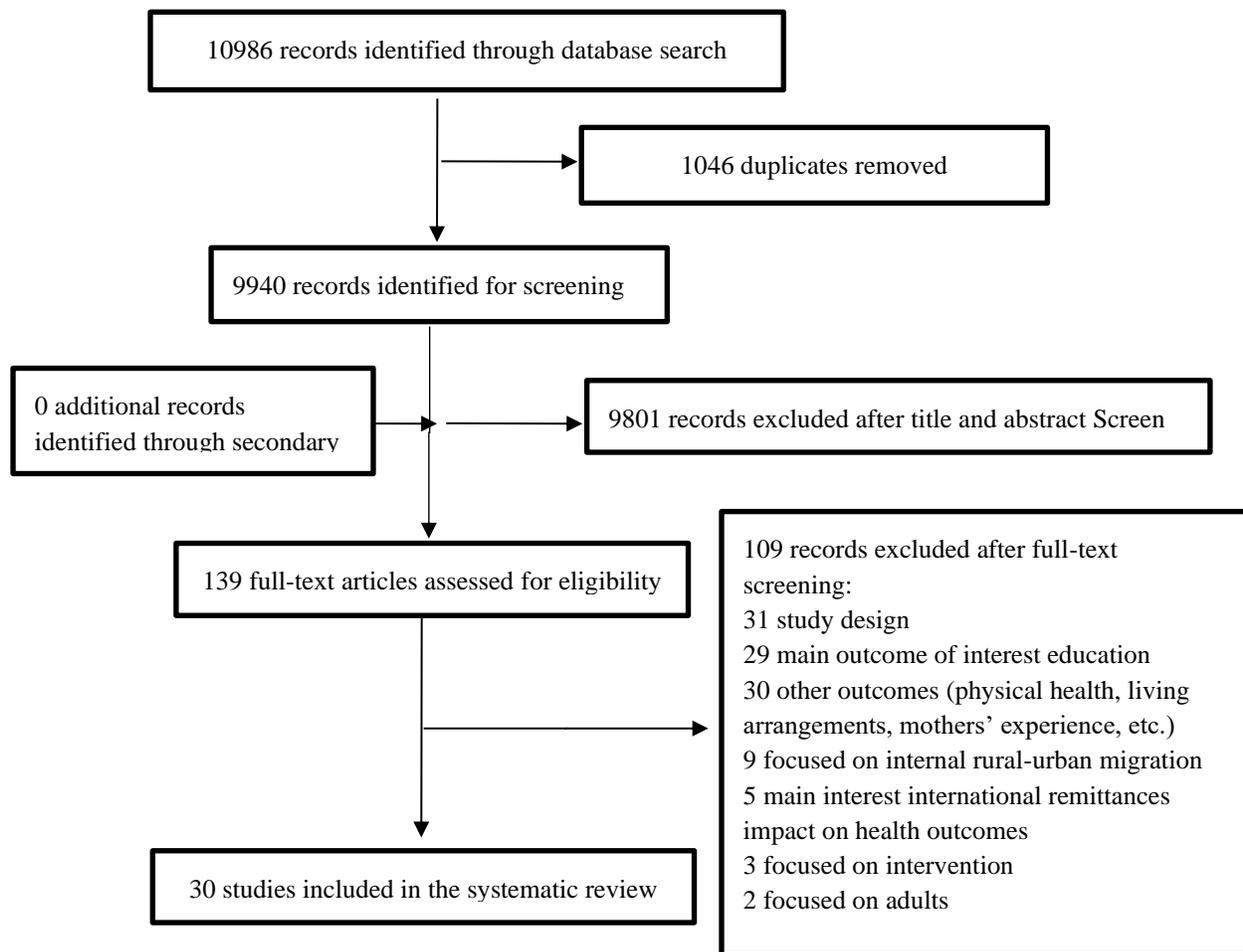
This section illustrates the results of each study included in this mixed methods research. Results are described in terms of sample characteristics and the main findings obtained. Each study's findings are integrated and presented in a table (Table 17) at the end of the section. Subchapters 3.1 (Antia et al. 2020), 3.2 (Antia et al. 2022) and 3.3 (Antia et al. 2023) present the results of the studies published in peer-reviewed journals.

#### **3.1. Impact of international migration on the mental health and well-being of left-behind children**

In this section, I present the results of the systematic literature review corresponding to study objective (i) investigating the mental health and well-being effects of international parental migration on left-behind children.

##### **3.1.1. Study selection and characteristics**

Searching relevant studies across databases resulted in 10,986 articles, of which 9940 remained after removing duplicates. Upon screening titles and abstracts, 139 full-text articles remained, from which I included 30 articles in the final analysis. Grey literature search and screening of the reference lists of included articles did not result in additional relevant articles. During the screening phase, studies were excluded based on the exclusion criteria laid out in section 2.2.1. In this subchapter, ID numbers are used, which refer to the publications in the study characteristics Table 2 (below). Figure 7 (PRISMA diagram) illustrates the study selection process.



**Figure 7.** PRISMA diagram: Study selection

Source: (Antia et al. 2020)

Twenty cross-sectional studies in this review examined the mental health and well-being of left-behind children and their peers who lived with both parents (non-left-behind children) as a reference group (ID: 1, 4, 7, 8, 9, 12, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 27, 29). Seven studies had mixed methods designs (ID: 2, 3, 5, 6, 10, 11, 13), from which I included a quantitative component in the analysis. Two studies analysed panel data (ID: 26, 28). Table 2 illustrates the characteristics of included studies.

**Table 2.** Study characteristics by country and participant age, risk of bias ABC (A- low, B - moderate, C-high risk; study quality assessment scores in brackets, ID numbers refer to the publications

Source: (Antia et al. 2020)

<b>ID</b>	<b>Source</b>	<b>Country</b>	<b>Study type</b>	<b>Age</b>	<b>Sample N</b>	<b>Outcome</b>	<b>Risk of Bias</b>
1	(Lahaie et al. 2009)	Mexico	cross-sectional	0-15	1509 (households)	Emotional health, behavioural problems	B (9/14)
2	(Heymann et al. 2009)	Mexico	mixed	0-15	1509 (households)	Well-being	B (9/14)
3	(Aguilera-Guzmán et al. 2004)	Mexico	mixed	11-14	310	Stressors, compensators	B (8/14)
4	(Wickramage et al. 2015)	Sri Lanka	cross-sectional	0-18	820	Mental health	B (8/14)
5	(Senaratna et al. 2011)	Sri Lanka	mixed	5-10	253	Mental health	B (9/14)
6	(Jampaklay and Vapattanawong 2013)	Thailand	mixed	9-11	496	Subjective Well-Being, Resilience	A (10/14)
7	(Adhikari et al. 2014)	Thailand	cross-sectional	3-5, 9-11	519 LBC, 511 NLBC	Mental health	B (8/14)
8	(Umami and Turnip 2019)	Indonesia	cross-sectional	11-15	359 LBC, 270 NLBC	Emotional and behavioural problems, loneliness	B (7/14)
9	(Graham and Jordan 2011)	Indonesia, The Philippines, Thailand, Vietnam	cross-sectional	0-12	3876 (households)	Child well-being SDQ	B (8/14)
10	(Graham et al. 2012)	Indonesia, The Philippines	mixed	0-12	1010	Subjective well-being - Self-reported happiness	B (9/14)
11	(Lam and Yeoh 2019a)	Indonesia, The Philippines	mixed	9-11	Indonesia: 513 The Philippines: 500 (households)	Well-being; general happiness	B (8/14)
12	(Lahaie et al. 2009)	Indonesia, The Philippines, Vietnam	cross-sectional	9-11	1498	Psychological well-being	B (9/14)
13	(Asis 2006)	The Philippines	mixed	10-12	1443	Well-being: incidence of abuse, emotional health	B (9/14)
14	(Mordeno et al. 2019)	The Philippines	cross-sectional	11-17	466	Mental health, well-being, parent-child relationship	B (7/14)
15	(Smeekens et al. 2012)	The Philippines	cross-sectional	13-18	205	Missing parents, perceived stress, loneliness, coping	B (7/14)
16	(Vanore et al. 2015)	Moldova	cross-sectional	4-17	1979	Psychosocial health SDQ	B (8/14)
17	(Vanore 2016)	Georgia	cross-sectional	4-17	1282	Psychosocial health SDQ	B (8/14)
18	(Gassmann et al. 2018)	Moldova, Georgia	cross-sectional	5-17	Moldova: 3571 Georgia: 4010 (households)	Multidimensional well-being	B (7/14)

<b>ID</b>	<b>Source</b>	<b>Country</b>	<b>Study type</b>	<b>Age</b>	<b>Sample N</b>	<b>Outcome</b>	<b>Risk of Bias</b>
19	(Botezat and Pfeiffer 2020)	Romania	cross-sectional	11-15	279 LBC, 1142NLBC	Psychological well-being	B (9/14)
20	(Tomşa and Jenaro 2015)	Romania	cross-sectional	12-15	163 LBC, 163 NLBC	Anxiety, anger, depression, Coping	B (8/14)
21	(Cebotari et al. 2018b)	Moldova, Georgia	cross-sectional	10-18	Moldova: 1601 Georgia: 1193	Child Health, well-being	B (8/14)
22	(Leskauskas et al. 2020)	Lithuania	cross-sectional	10-19	1292	Emotional and Behavioural Problems	B (7/14)
23	(Cebotari et al. 2017)	Ghana, Nigeria	cross-sectional	11-18	Ghana: 2760 Nigeria: 2168	Self-rated health emotional wellbeing	B (8/14)
24	(Mazzucato and Cebotari 2017)	Ghana	cross-sectional	11-21	2760	Self-reported psychological health, well-being	B (8/14)
25	(Mazzucato et al. 2015)	Ghana, Nigeria, Angola	cross-sectional	11-21	Ghana: 2760 Angola: 2243 Nigeria: 2168	Self-reporting, psychological well-being	B (8/14)
26	(Cebotari et al. 2018a)	Ghana	longitudinal	12-21	741	Self-rated health, happiness, life satisfaction	A (11/14)
27	(Pottinger 2005)	Jamaica	case-control	9-10	27 LBC, 27 NLBC	Psychological difficulties, behaviour, emotional well-being	B (6/12)
28	(Viet Nguyen 2016)	Ethiopia, India, Peru, Vietnam	longitudinal	5-8	7725	Cognitive ability	B (9/14)
29	(Wu and Cebotari 2018)	China, Ghana	cross-sectional	11-20	Ghana:1622	Child well-being: life satisfaction, resilience, vulnerability	B (7/14)
30	(Fellmeth et al. 2018)	International	SR and meta-analysis	0–19	106167 LBC, 158800 NLBC	Mental health, other	A (8/8)

The studies included left-behind children of migrant mothers, fathers or both parents; the authors primarily used questionnaires designed for parents or caregivers to evaluate children’s health. Surveys mostly took place in households, but some were conducted in schools. Several studies also included children’s self-reported measures.

In terms of outcome measures, the studies applied various tools such as The Strength and Difficulties Questionnaire (SDQ) (ID:7, 8, 9, 16), Total Difficulties Scores (TDS) (ID: 22, 24, 25) of the SDQ, Achenbach’s Child Behaviour Checklist (CBCL), cognitive skills tests (ID: 28), and Short Mood and Feelings Questionnaire (SMFQ) (ID: 20). In addition to standardised questionnaires, some studies employed self-evaluated mental health (loneliness, bullying, conflicts with peers/parents/teachers) and well-being (happiness, life satisfaction) (ID: 6, 12, 19, 22, 23, 24,

26, 29). The Anger Expression Scale for Children (AESC) (ID:20), the Parent-Child Relationship Schema Scale (PCRSS) (ID:14), The Social Anxiety and Loneliness Scale, and the Multi-Dimensional Scale of Perceived Social Support (MSPSS) (ID:8) are the scales that researchers have used in some studies. Several studies examined how left-behind children's well-being is affected by transnational family characteristics (ID:2, 9, 24, 25, 26). Material benefits, caregiver engagement, and child-care practices have all been employed in some studies as indicators of family characteristics that may improve children's health and happiness in transnational families (ID: 1, 2, 23, 24, 26).

Most studies included in this review conducted a descriptive analysis. The authors reported percentages, mean scores with standard deviations, Pearson's chi-squared-test, or t-test. Multivariate logistic regression, multiple regression, and multiple analyses of variance (MANOVA) were commonly used analytical approaches.

Several studies included in this review analysed datasets from large-scale cross-country and nationally representative projects, such as the "Effects of Migration on Children and the Elderly Left Behind in Moldova and Georgia" (CELB-MD/GE) (ID: 16, 17, 18, 21), and the "Child Health and Migrant Parents in Southeast Asia project" (CHAMPSEA) (ID: 6, 9, 10, 11, 12). The CELB-MD/GE is an Eastern European household survey focusing on labour migrants and their left-behind children from Georgia and Moldova. The CHAMPSEA survey focuses on Southeast Asian countries, such as Indonesia, the Philippines, Thailand, and Vietnam.

### **3.1.2. Geographical context**

Studies included in this analysis covered broad geographical areas. As illustrated in the study characteristics table (Table 2), 12 studies originated in South-East and South Asia (Indonesia, the Philippines, Thailand, Vietnam, India and Sri Lanka), seven in Eastern Europe (Georgia, Lithuania, Moldova, and Romania), four in Africa (Angola, Ghana, and, Nigeria) and four in Americas (Jamaica and Mexico). Three studies included countries from different continents (Ethiopia, Ghana, India, Peru, and Vietnam).

## **Americas**

Three studies examined parental emigration effects on left-behind children in Mexico (ID:1, 2, 3). In analysing data from the same Mexican household survey, the authors found that left-behind children had more emotional and behavioural difficulties than those living with both parents. In particular, studies have shown that children of migrants were more susceptible to stress, vulnerability, fear, and insecurity than those of non-migrants. For example, in the study by Pottinger, 45% of Jamaican left-behind children reported being angry, and 77% considered themselves insecure (Pottinger 2005).

## **South and Southeast Asia**

Research in Sri Lanka indicated an inverse relationship between having migrant parents and experiencing emotional and behavioural difficulties; for example, self-reported mental health problems were 30% higher in left-behind children than in non-left-behind children (ID: 4, 5). A study by Viet examined left-behind children's cognitive development using the Peabody Picture Vocabulary Test (PPVT) and found developmental delays among children of migrants (PPVT-LBC = 52.40, PPVT-NLBC = 59.65) (Viet Nguyen 2016).

Research conducted in Southeast Asia showed incongruent results. Adhikari and colleagues suggested no correlation between parental absence and psychological health among left-behind children in Thailand (Adhikari et al. 2014). While a study by Asis found that Filipino children benefit from their parents' migration; they are less anxious and happier than other children of non-migrating parents (Asis 2006). In contrast, Indonesian and Vietnamese children separated from their fathers due to migration reported worse mental health outcomes when compared to those of non-migrant parents, and the children of migrant mothers showed the most vulnerability (ID: 8, 9, 11). Other studies from the region suggested that children of migrants face more emotional and behavioural problems and become less resilient than their children who live with both parents (ID: 10, 12, 15).

## **Eastern Europe**

Research on left-behind children from Eastern Europe originated in Georgia, Lithuania, Moldova, and Romania (ID: 17, 18, 19, 20, 21, 22). Studies have shown parental migration's negative to non-differing or positive effects on children. For example, research conducted in Georgia and Moldova suggested similar or even better mental health and well-being outcomes among children of migrants than children of non-migrants (well-being score: Georgian LBC = 90.9%, non-LBC = 82.1%, Moldovan LBC = 84.8%, non-LBC = 83.9%) (ID: 18, 21). Unlike Georgia and Moldova, studies conducted in Romania and Lithuania found that parental absence negatively affects children left in their countries of origin (ID: 19, 20, 22). For example, the study by Tomşa and Janero observed that children of migrants are more anxious and depressed than their peers living with both parents (Tomşa and Jenaro 2015). The authors concluded this by measuring State-Trait Anxiety Inventory (STAIC) and Short Mood and Feelings Questionnaire (SMFQ) scores (ID:20). In the same study, the authors also measured children's coping with stress and found that regardless of their parent's migration status, children show similar coping skills (Tomşa and Jenaro 2015). Like Romania, left-behind children in Lithuania showed worse emotional and behavioural health outcomes when compared to non-left-behind children (ID: 22).

## **Africa**

Studies on left-behind children from African regions originated in Angola, Ghana and Nigeria (ID: 26, 22, 24, 25). Cebotari and colleagues investigated Ghanaian left-behind children's self-evaluated mental health outcomes in the context of transnational family characteristics (Cebotari et al. 2018a). Ghanaian schoolchildren of migrant and non-migrant parents reported similar well-being outcomes. The authors highlighted the role of transnational family characteristics in the well-being of African children. For example, when children were left with caring family members, they reported being satisfied with life (ID: 24, 26). Overall, left-behind children from Angola showed worse mental health outcomes when compared to children from Ghana and Nigeria (ID:25).

## **Across regions**

Some studies examined left-behind children's mental health across regions (ID: 28, 29, 30). The study by Viet evaluated children's cognitive development in Ethiopia, India, Peru, and Vietnam and compared results with children of non-migrant parents; only in Peru did left-behind children outperform non-left-behind children on cognitive ability tests; in other settings, children of migrants obtained lower scores and, the difference was statistically significant in India (Viet Nguyen 2016). The author suggests that the longer children are separated from their parents, the more delayed their cognitive development is (ID:28). Another group of authors investigated Ghanaian and Chinese left-behind children's well-being and found worse outcomes among children of migrants than those of non-migrants (ID:29). A systematic review and meta-analysis examined parental migration's physical and mental health outcomes on children (Fellmeth et al. 2018). Almost 90% of studies in the review originated in China, where migration is internal (rural-urban), remaining 10% of studies analysed physical health or mental health outcomes. This systematic review includes all international migration and child mental health-focused studies from Fellmeth and colleagues (Fellmeth et al. 2018).

### **3.1.3. Gender and age aspects**

Some studies included in this review additionally investigated how left-behind children's mental health and well-being outcomes differ based on their gender and the gender of a migrant parent (ID: 3, 6, 7, 12, 15, 16, 19, 21, 24, 26, 29). For example, Jampaklay and Vapattanawong highlighted that left-behind children in Thailand benefit from their fathers' migration and are happier than non-left-behind children (ID:6). Another group of authors (ID:3) examined this issue using the stress theory and suggested that the father's migration is not necessarily associated with adverse mental health outcomes for younger children in Mexican transnational families; however, due to fathers' absence, adolescent boys and girls usually need to perform household chores, leading them to social inequity and vulnerability (ID:3). Another study examined the difference between mothers' and fathers' migration regarding child mental health outcomes in Moldova and found more vulnerability in children of migrant mothers than those of migrant fathers or non-migrant parents (ID:16). When separated from their mothers, younger children in Southeast Asia showed even more vulnerability (ID: 7, 12, 15).

A group of authors have also investigated the gender of left-behind children and mental health outcomes in Ghana and Eastern European countries – Georgia, Moldova, and Romania (ID: 19, 21, 26, 29). Research has indicated that girls from transnational families are more vulnerable than boys (ID: 19, 21, 26, 29). For example, a study by Cebotari and colleagues suggested that left-behind Ghanaian girls are less happy and satisfied with life and enjoy school less than boys. The authors proposed that boys are valued more than girls in Ghana, Georgia, Moldova, and Romania, which causes the girls to take greater responsibility for the tasks that the migrant parent usually did (ID: 21, 29).

Some studies underscore the importance of age in how children experience their parents' migration (ID: 3, 18, 28, 29). The authors suggest that left-behind children's vulnerability increases with age (ID: 18, 23). According to Aguilera-Guzman and colleagues, adolescents from transnational families are more likely than other groups to experience stress-related, behavioural, and other mental health illnesses; they are also at increased risk of smoking or consuming alcohol (Aguilera-Guzmán et al. 2004). In contrast, Viet argues that younger age is more critical as cognitive development delays in five to eight years olds due to parental migration (Viet Nguyen 2016).

#### **3.1.4. Synthesis of results**

Some studies from Africa, Southeast Asia, and Eastern Europe applied Strength and Difficulties Questionnaire (SDQ) and calculated Total Difficulties Scores (TDS) to evaluate emotional and behavioural difficulties in left-behind and non-left-behind children (ID: 7, 8, 9, 16, 22, 24, 25). A study by Graham and Jordan found better outcomes among Thai left-behind children; they obtained lower SDQ and TDS scores than children of non-migrants (Graham and Jordan 2011). In contrast, other studies from Africa, Southeast Asia and Eastern Europe showed worse mental health outcomes among children of migrants than those of non-migrants (ID: 7, 8). Tables 3 and 4 show the SDQ and TDS scores from individual studies.

Studies analysing SDQ scores in the context of migrant parents' gender showed higher problem scores among children of migrant fathers than those of migrant mothers in Indonesia and Vietnam. In contrast, children of migrant mothers showed more vulnerability than those of migrant fathers in Thailand. Children of migrant mothers obtained lower emotional and behavioural problem

scores than children of non-migrant parents and children of migrant fathers in Moldova, Vietnam, and the Philippines (Tables 3 and 4).

**Table 3.** Studies reporting abnormal Strengths and Difficulties Questionnaire (SDQ) scores among left-behind and non-left-behind children by country and migrant parent’s or child’s gender.

Source: (Antia et al. 2020)

Country	Study, ID	SDQ non- LBC (control)	Father migrated		Mother migrated	
			SDQ	Odds Ratio [95 % CI]	SDQ	Odds Ratio [95 % CI]
Indonesia	(Graham and Jordan 2011), 9	25.4	42.5	2.19 [1.50-3.20]	31.7	1.35 [0.97-1.89]
Moldova male LBC	(Vanore et al. 2015), 16	12.1	13.1	1.12 [0.71-1.72]	10.8	0.89 [0.50-1.49]
Moldova LBC female	(Vanore et al. 2015), 16	16.7	13.5	0.77 [0.49-1.17]	15.6	0.93 [0.57-1.45]
The Philippines	(Graham and Jordan 2011), 9	25.6	18.9	0.68 [0.48-0.95]	16.4	0.57 [0.29-1.04]
Thailand	(Graham and Jordan 2011), 9	11.3	11.1	0.99 [0.65-1.49]	-	-
Thailand	(Adhikari et al. 2014), 7	11.0	13.4	1.26 [0.87-1.82]	22.8	2.40 [1.73-3.36]
Vietnam	(Graham and Jordan 2011), 9	24.9	33.5	1.53 [1.05-2.20]	15.2	0.55 [0.36-0.81]
<b>Any parent migrated</b>						
Indonesia	(Umami and Turnip 2019), 8	21	28.4	1.49 [0.66–3.53]	-	-

**Table 4.** Studies reporting Total Difficulties Scores (means) from Strengths and Difficulties Questionnaire (SDQ). Higher psychological distress is indicated by a higher score. Studies have performed chi-squared tests and analysis of variance (ANOVA).

Source: (Antia et al. 2020)

Country	Study, ID	TDS Non-LBC	TDS LBC	P value
Angola	(Mazzucato et al. 2015), 25	13.0	16.1	<0.001
Ghana	(Mazzucato et al. 2015), 25	11.3	12.1	<0.05
	(Mazzucato and Cebotari 2017), 24	11.3	11.5	not significant
Lithuania	(Leskauskas et al. 2020), 22	10.2	11.4	<0.05
Nigeria	(Mazzucato et al. 2015), 25	10.9	11.8	<0.001

Left-behind children’s mental health and well-being outcomes differed across studies. Table 5 summarised and contrasted results from included studies to highlight key findings across and within regions.

**Table 5.** Children’s mental health and well-being outcomes by their parents’ migration status (Study IDs in superscript)

Source: (Antia et al. 2020)

	Higher among LBC	No difference	Lower among LBC
	<b>positive outcomes</b>		
Africa		Happiness <sup>26</sup> , satisfaction <sup>23</sup> , school enjoyment <sup>6</sup> , self-rated health <sup>26</sup>	satisfaction <sup>29</sup> , school enjoyment <sup>12</sup> , self-rated health <sup>23</sup> , well-being <sup>24,25</sup> , cognitive ability <sup>28</sup>
Eastern Europe	self-rated health <sup>21</sup> , well-being <sup>18</sup>	coping <sup>20</sup> , well-being <sup>18</sup>	
Americas			self-esteem <sup>27</sup> , coping <sup>3</sup> , well-being <sup>1,2</sup> , cognitive ability <sup>28</sup>
South Asia			cognitive ability <sup>28</sup>
Southeast Asia	well-being <sup>13</sup> , personal psychological resources <sup>14</sup>		Happiness <sup>6, 10, 11, 13, 15</sup> , cognitive ability <sup>28</sup> , well-being <sup>9,11,12</sup>

	Higher among LBC	No difference	Lower among LBC
<b><u>negative outcomes</u></b>			
<b>Africa</b>	behavioural problems <sup>24,25</sup> , mental health disorders <sup>24,25</sup>		
<b>Eastern Europe</b>	anxiety/stress <sup>19,20</sup> , behavioural problems <sup>16,22</sup> , emotional problems <sup>22</sup> , depression <sup>19,20</sup>	Anger <sup>20</sup> , behavioural problems <sup>18</sup> , mental health disorders <sup>16,17,18</sup>	mental health disorders <sup>18</sup>
<b>Americas</b>	behavioural problems <sup>29,27</sup>		
<b>South Asia</b>	behavioural problems <sup>5</sup> , mental health disorders <sup>4</sup>		
<b>Southeast Asia</b>	anxiety/stress <sup>15</sup> , loneliness <sup>8,15</sup> , mental health disorders <sup>9</sup> , behavioural problems <sup>8</sup>	mental health disorders <sup>9,7</sup>	Abuse <sup>13</sup> , anxiety/stress <sup>15</sup> , loneliness <sup>15</sup> , mental health disorders <sup>7</sup>

As Table 5 illustrates, all studies from the Americas (ID: 1,2, 3) and South Asia (ID: 4, 5) suggest only the adverse impact of migratory separation on left-behind children; in particular, children of migrants' experience emotional and behavioural difficulties and become less resilient. In contrast, results from studies conducted in other regions are inconsistent. For example, other studies from Eastern Europe and Southeast Asia show adverse, similar, or favourable outcomes. No positive results are observed in Africa, where outcomes varied from negative to non-differing among left-behind and non-left-behind children.

### **Limitations of included studies**

The quality assessment showed a moderate risk of bias in most included studies; several authors did not mention participation or response rate. Even studies with panel data failed to report the loss to follow-up. Most studies had a cross-sectional design, not measuring children's mental health and well-being before their parents' migration and not following up with children after separation from their parents.

### 3.2. Schoolteachers' perceptions of labour migration and left-behind children

This section presents the results of the qualitative study with schoolteachers corresponding to study objective (ii) exploring schoolteachers' perceptions and perspectives on parental migration and left-behind children in Georgia.

#### 3.2.1. Sample characteristics

School principals and teachers from six public schools in Samegrelo Zemo-Svaneti and Guria regions participated in the study. Table 6 illustrates school characteristics. Since there is no obligation for school administration to record the number of left-behind children, the principals estimated percentages for this study.

**Table 6.** Characteristics of participating schools, and estimated percentage of left-behind children

Source: (Antia et al. 2022)

School ID	A	B	C	D	E	F
School size [N students]	478	92	118	627	114	38
LBC estimated %	30%	20%	15%	20%	15%	50%
Area	urban	rural	urban	urban	rural	rural
Region	SZS*	SZS	G*	G	SZS	G

*SZS\*- Samegrelo-Zemo Svaneti region; G\*- Guria region*

I conducted six in-depth interviews with one male and five female school principals aged from 56 to 74 years and six focus group discussions (FGD), three of which consisted of all-female and the other three included both genders. Each FGD consisted of seven to twelve participants aged from 30 to 69. FGD participants were 11 years younger on average than school principals. Working experience as a school principal ranged from four to 27 years. Overall, most participants were female, reflecting the gender ratio of school personnel in Georgia.

Schoolteachers and principals named Turkey, Italy, Poland, Greece, Israel, Ukraine, and Russia among the top destination countries for Georgians. Participants’ opinions on where Georgian parents seek employment may not accurately represent the migration patterns; however, official statistics are unavailable. Table 7 presents the main themes and sub-themes identified through the data analyses.

**Table 7.** Main themes and corresponding subthemes identified through reflexive thematic analysis

Source: (Antia et al. 2022)

<b>Main Theme</b>	<b>Sub-theme</b>
<b>1. Social and economic impact of migrant labour</b>	<ul style="list-style-type: none"> <li>- Physical and mental health impact of separation</li> <li>- Impact of gender on separation and academic performance</li> <li>- Role of schools – care-substitutes versus caregivers</li> <li>- Economic impact – materialism</li> <li>- Long term separation of parents leading to divorce</li> </ul>
<b>2. Relationships between Schools and Migrant families</b>	<ul style="list-style-type: none"> <li>- Disrupted communication and parents expecting teachers to fill gaps</li> <li>- Schools in need of external support</li> </ul>

### **3.2.2. Theme 1: Social and economic impact of migrant labour**

In the sections below, I illustrate the impact of parental absence on children from the perspective of school personnel. The following aspects are highlighted: physical and psychological health; academic performance; children's gender and age; the role of transnational family members and schools in children’s well-being; remittances and financial gains; and other societal effects of migrant labour.

## **Physical and mental health**

The study participants suggested that parental absence harms children's mental and physical health. Schoolteachers observe that after separation from parents, children experience melancholy and unhappiness, anxiety, anger, and even depression.

The participants described how children's lives change due to their parents' migration. For example, one of the school principals referred to this change with the following words:

*“He was such a talented, well-disciplined child, but separation overshadowed everything. He became aggressive. Even involvement of the police was necessary, and currently, he is under the constant supervision of the school and the police.”* (IDI\_D); (Antia et al. 2022).

Schoolteachers believe that elementary school children are more willing to express their needs and feelings. In contrast, children in higher grades and adolescents become distant, which makes it challenging to identify their needs and support. To explain this situation, one of the tutors shared:

*“When they are little, they miss their parents a lot. They need warmth. They come and hug us all the time, they seek mothers in us, but when they get older, they try so hard not to show it, they lock themselves inside.”* (FGD\_A\_9); (Antia et al. 2022)

Schoolteachers across interviews highlighted the importance of migrant parents' gender in how children experience separation from their parents. IDI and FGD participants described children of migrant mothers as more vulnerable than those of migrant fathers or non-migrant parents. In the participants' opinion, mothers serve as role models for children. One of the class tutors stressed this aspect:

*“When the mother is helping a child with class materials, the child sees the God in her. In the child's perception, the mother can do anything, “She can help me solve math problems, and she can help me do my homework,” – thinks a child and now, in such a situation, most of our pupils suffer from the separation with the mother.”* (FGD\_D\_3); (Antia et al. 2022).

Regardless of which parent migrated, IDI and FGD participants concurred that children see separation from a parent as distressing, and those of both absent parents show the most

vulnerability. Some principals even refer to children of both migrating parents as *orphans*. Even though children can now communicate with their parents daily, teachers believe that parents' physical presence is essential for their children's healthy physical, cognitive, and emotional development.

Most class tutors expressed their concerns about inadequate nutrition and unhealthy eating practices among children of migrants. In the participants' view, they tend to spend the money received from migrant parents on fast-food and sweetened, unhealthy beverages. FGD participants from urban schools stressed this aspect even more. The participants are concerned about unhealthy eating habits children of migrants may develop that would encourage their classmates to behave similarly, eventually leading to adverse physical health outcomes. Participants across rural and urban schools considered children's essential nutrition needs satisfied; none viewed left-behind children as malnourished or stunted due to insufficient food.

### **Gender and education**

Participants across interviews highlighted migrating parent' and left-behind child's gender and its impact on child well-being. Schoolteachers believed girls whose mothers migrated were responsible for assisting their grandmothers with household chores, childcare duties, and cooking. Another issue was the absence of fatherly supervision; teachers also highlighted that adolescent boys of migrant fathers tend to engage in unhealthy and dangerous behaviours, including smoking, drinking alcohol, and gambling. The participants explained this with the absence of fatherly supervision.

Teachers across the focus groups discussed the academic performance of left-behind children. Most participants argued that when a parent migrates, pupils' school grades gradually worsen, and it becomes challenging for children to follow up with the study program. However, some participants also argued that children from well-disciplined, supportive families perform well at school. Schoolteachers also acknowledged that even when children's grades worsen due to parental absence, it gets better again after parents return.

## **Schools' role as care-substituted and caregivers**

Schoolteachers in this study envisioned themselves as care substitutes and mediators for children and their transnational families.

The school principals described the following supportive activities:

- Regular teacher conferences devoted to left-behind children's issues;
- Identifying students needing additional assistance with their studies;
- Interacting with parents and other transnational family members;
- Requesting assistance from the police and a social service agency if needed.

To emphasize their role in supporting left-behind children and their families, one of the FGD participants expressed:

*“We, teachers, feel what the problems are and try to resolve them so that something fatal does not happen. We use different techniques. We also read psychological literature and provide psychological help to these children. Today, this is the foundation of our success. All of us do this individually and by sharing”.* (FGD\_A\_9); (Antia et al. 2022).

The study participants viewed their efforts as helpful for children who experience adverse effects of migratory separation from their parents. They assumed that a caring and supportive environment makes students feel comfortable and secure at school.

Schoolteachers described grandparents, in particular, as supportive carers. Nevertheless, teachers recognized that a caregiver's advanced age could negatively affect the quality of care. The participants viewed children whose primary caregivers were young grandmothers (50 to 60 years old) had better care than children whose grandmothers were older. Teachers across focus groups argued that elderly carers usually suffer from multiple chronic illnesses and cannot provide quality care. Inadequate care may lead to poor nutrition, worsened school grades, unhappiness, sadness, and other mental health problems. The participants also observed that children under the care of elderly grandparents expressed constant worries about their caregiver's health and fear of their possible death.

Recalling her conversation with one of the students, FGD\_ B 3 voiced:

*“Teacher, you know, I could not sleep all night because my grandmother was sick, and I was afraid,” told me, a girl of a migrant mother. [...] the child thinks for her future; she does not know who will care of her if the grandmother dies”*(Antia et al. 2022).

The participants generally perceived left-behind children’s interactions with their caregivers as open and warm. Nevertheless, they also mentioned having disagreements and communication challenges. For example, principals reported that some left-behind adolescents refuse to be under their grandmother’s care, and caregivers seem to face challenges in dealing with teenagers and frequently call the school for assistance.

### **Economic benefits – materialism**

Participants across focus groups argued about remittances sent by migrant parents and their impact on children’s well-being. The teachers from the urban public schools believed that left-behind children benefit from the remittances their parents sent. During the FGDs, the schoolteachers debated the economic benefits of migrant labour, somewhat overshadowing the loss brought on by separation. To address this issue, one of the FGD participants shared:

*“They suffer a lot, but their basic needs are met; they have better living conditions now. The material benefits gradually bring ‘sweetness’ that they do not feel that much pain when they grow up.”* (FGD\_ C\_7); (Antia et al. 2022).

Unlike urban communities, schoolteachers from rural areas did not see any considerable material advantages in children of migrants. In the FGD participants’ views, parents migrate due to extreme poverty and remittances they send to their families are used for repaying multiple debts.

Even though this study was not designed to explore child labour, participants across the focus groups highlighted that some migrant parents tend to encourage their teenage sons and daughters to migrate with them and perform seasonal work. The participants expressed their fears of children being less motivated to study well and more motivated to earn money while not being physically capable of performing adults’ work.

The findings suggest that children in transnational families may view labour migration as a desired future, motivating them to follow their parents' path. The participants fear that children may see only the positive and ignore the difficulties their parents face, such as leaving families behind to perform hard, physically demanding work abroad.

### **Socio-economic impact of separation**

Participants from rural to urban schools perceived parental migration as a means of escaping extreme poverty, but they also worried that it might cause societal unrest. For example, one of the class tutors voiced:

*“This is a social disaster that we are having in our country. Maybe in other countries, too, but mostly in our country. This is the destroying force for our society. We do not want to make a drama out of it, but this is a real tragedy.”* (FGD\_A\_2); (Antia et al. 2022).

Analysis of the collected data led to another aspect of parental migration: some participants reason that mothers sometimes escape from conflicts with their husbands, and prolonged separation could also result in divorce. Overall, schoolteachers believe that children in transnational families, where parents are divorced, suffer the most.

### **3.2.3. Theme 2: Relationships between schools and transnational families**

In the sections below, I present another central theme of the study: relationships between schools and families of left-behind children. This theme covers difficulties in building good relationships with parents and caregivers and schoolteachers' and principals' views on how to support the children of migrants.

#### **Disrupted communications**

This study revealed that school personnel often face challenges communicating effectively with parents or caregivers of left-behind children. The study participants claim that despite their best efforts and several attempts, they are rarely successful in conveying their message to migrant parents. The participants across the interviews argued that some parents overestimate teachers' roles expecting the school to fulfil the parenting responsibilities for their children. The following quote shows how one of the participants views the problem:

*“Children obviously have certain mental health issues, poor socio-economic conditions added to that. They need help; however, it is often difficult to communicate with parents; we try to connect them via Facebook and send messages almost every day; however, some never respond.”* (IDI \_D); (Antia et al. 2022).

### **External support needs**

According to all six principles, their schools are not required to monitor the number of students whose parents migrate for work. The Ministry of Education does not request that data, nor do they voluntarily track those students. Often parents do not notify the school about their migration, and the school has no information about who is responsible for the child. The interviewed principals consider it necessary for the Ministry to monitor the children of migrant parents.

*“We have had such discussions at the local resource centre. Especially among high school students, we have many cases of missing at school, mostly children whose mothers or fathers are migrants. We have talked about this issue, but the representatives of the Ministry or any other organization have not addressed this issue and have not expressed interest.”* (IDI \_B); (Antia et al. 2022).

Some study participants highlighted the absence of a term to describe children of migrant parents in the Georgian language. Considering that Georgia is a migrant-sending country, and thousands of children have migrant parents, the participants wish to have a term for registration purposes to avoid referring to children of migrants as "such children" in conversations.

The participants named The Social Service Agency of Georgia as the only organization they could rely on when pupils need external support. All study participants highlighted the need for psychologists at schools; by the time of the interview, none of the schools had such a service.

Schoolteachers across interviews urged support for the left-behind children in migrant households. Even though all participants acknowledge that parents migrate due to poverty, they also argue that there could be other solutions for parents to improve their living conditions while remaining with their children. Some teachers believe that migrant parents often are unaware of the possible harm their absence could bring to their children. In participants’ perception, parents exclusively

motivated by economic prospects may gradually lose warm relationships with their children. One of the participants highlighted the necessity of acting:

*“Whether it is a state or a non-governmental organization, it does not matter, but we need an organization that will work with parents, on their education and awareness, their attitudes towards school and their children. A teacher instructs children on what to do and how to do it, but when we observe, we see it is not working; the family environment should also change.”* (IDI\_E); (Antia et al. 2022).

Overall, participants’ opinions, regardless of their position (tutors, principals), coincide in most respects. They view parental migration and the well-being of left-behind children as Georgia’s emerging issue needing immediate attention. They also express readiness to support pupils of migrant parents in their schools.

Regarding the gender-differentiated analysis, this study found that male and female teachers share similar opinions about left-behind children and their families. I identified only minor differences through the data analysis. For example, while male participants stressed the significance of fathers’ presence for boys, female participants tended to see mothers’ absence as more distressing for the children. One of the male tutors reasoned that daughters who are left behind could become hostile to their fathers and accuse them of being responsible for their mother’s migration.

### 3.3. Left-behind children’s self-reported emotional and behavioural problems

This section presents the results of the quantitative school survey with schoolchildren corresponding to study objective (iii) assessing parental labour migration effects on children’s mental well-being and identifying the needs of Georgian left-behind children.

#### 3.3.1. Sample characteristics

All 2,495 students in grades VII through XII from 18 selected public schools in rural and urban areas were invited to participate in the study; overall, 933 (37.9%) schoolchildren accepted, and each school’s participation ranged widely (from 10.7% to 70.7%). The details of the schools are listed in Table 8.

**Table 8.** Characteristics of participating schools (location, number of students, and participation)

Source: (Antia et al. 2023)

School N°	N of Students (Grade 7 to 12)	Location	Participation (%)
1	56	rural	64.3
2	72	rural	41.7
3	256	urban	70.7
4	61	rural	21.3
5	79	rural	35.4
6	112	urban	22.3
7	94	rural	39.4
8	36	rural	19.4
9	203	urban	54.2
10	148	urban	33.8
11	58	rural	46.6
12	297	urban	48.5
13	63	rural	42.9
14	89	rural	38.2
15	86	urban	68.1
16	81	rural	39.5
17	527	urban	14.6
18	177	rural	10.7
Total	2 495	-	37.4

Half the study participants were female, 45.4% were male, and 4.2% did not answer the question concerning their gender. Most (90%) schoolchildren stated no illness, 89.3% played sports, and 86.7% acknowledged having at least three close friends. Team sports, including football, basketball, volleyball, and table tennis, were frequently named sports activities. Approximately 90% of children reported enjoying activities, including reading, listening to music, dancing, playing video games and creating crafts.

While 4.4% of the participants reported having worse relationships with their classmates, 67.9% of schoolchildren reported better relationships with their parents and 52.2% with their siblings compared to other children of the same age. More than a quarter (27.7%) of the schoolchildren reported having at least one parent who is a migrant worker abroad, while 76.4% stated that both parents were present in the household; 22.2% of participants reported doing chores, including cleaning, and caring for siblings, and around 25% acknowledged having difficulties in their school life. A complete overview of the participant characteristics is provided in Table 9.

**Table 9.** Participant characteristics (N=933)

Source: (Antia et al. 2023)

<b>Variable</b>	<b>N</b>	<b>%</b>
<i>Gender</i>		
Girl	470	50.4
Boy	424	45.4
Missing	39	4.2
<i>Age group</i>		
12-13	359	38.5
14-15	336	36.0
16-18	238	25.5
<i>Performing any sport</i>		
Yes	833	89.3
No	96	10.3
Missing	4	0.4
<i>Number of siblings</i>		
0	159	17.0
1-3	399	42.8
4-5	25	2.7
≥6	5	0.5
Missing	345	37.0
<i>Doing chores</i>		
Yes	207	22.2
No	717	76.8
Missing	9	1.0
<i>Having an illness</i>		

<b>Variable</b>	<b>N</b>	<b>%</b>
Yes	64	6.9
No	840	90.0
Missing	29	3.1
<i>Number of close friends</i>		
0	24	2.6
1-3	353	37.9
≥4	522	55.9
Missing	34	3.6
<i>Having school problems</i>		
Yes	237	25.4
No	643	68.9
Missing	53	5.7
<i>Living with</i>		
Mother only	84	9.0
Father only	37	13.0
Both	712	76.3
Missing	100	10.7
<i>Relationship with peers (compared to peers)</i>		
Worse	41	4.4
Likewise	396	42.4
Better	416	44.6
Missing	80	8.6
<i>Relationship with siblings (compared to peers)</i>		
Worse	37	4.0
Likewise	268	28.7
Better	487	52.2
Do not have siblings	97	10.4
Missing	44	4.7
<i>Relationship with parents (compared to peers)</i>		
Worse	21	2.2
Likewise	192	20.6
Better	633	67.9
Missing	87	9.3
<i>Having at least one migrant parent</i>		
Yes	258	27.7
No	615	65.9
Missing	60	6.4

### **3.3.2. YSR syndrome scales, comparison with ASEBA Standard**

Using two-sample t-tests, I compared YSR syndrome scores (eight problem items) and broadband scales separately between adolescent boys and girls; then, the results were compared to the ASEBA normative sample (Standard group 2). Table 10 compares YSR empirical syndrome scales and the internalizing and externalizing broadband scales for girls and boys from this sample and compares results with the ASEBA Standard group 2.

**Table 10.** Youth Self Report - descriptive statistics for eight syndrome scales, broadband internalizing, and externalizing. Number of observations, mean scores, and p-values; comparisons among girls and boys of the study sample and with the ASEBA Normative Sample

Source: (Antia et al. 2023)

Outcome	ASEBA Normative Sample <sup>1</sup>										
	Girls			Boys			Girls			Boys	
Empirically based syndromes	N	mean (95% CI)	N	mean (95% CI)	p-value <sup>2</sup>	mean (normal range <sup>3</sup> )	p-value <sup>4</sup>	mean (normal range)	p-value <sup>4</sup>		
Anxious/Depressed	370	7.2 (6.7-7.7)	338	3.9 (3.6-4.3)	<0.001	5.1 (<12.0)	<0.001	3.4 (<9.0)	0.016		
Withdrawn/Depressed	424	5.4 (5.1-5.8)	372	4.0 (3.7-4.3)	<0.001	3.1 (<8.0)	<0.001	2.7 (<7.0)	<0.001		
Somatic Complaints	384	4.7 (4.3-5.0)	362	2.2 (2.0-2.5)	<0.001	3.4 (<8.0)	<0.001	2.3 (<7.0)	0.658		
Social Problems	420	4.1 (3.8-4.4)	359	3.4 (3.1-3.7)	0.002	3.2 (<8.0)	<0.001	2.9 (<8.0)	0.006		
Thought Problems	321	5.1 (4.6-5.7)	256	3.2 (2.8-3.6)	<0.001	3.7 (<10.0)	<0.001	3.1 (<9.0)	0.715		
Attention Problems	429	6.3 (6.0-6.6)	367	5.4 (5.1-5.8)	<0.001	4.6 (<10.0)	<0.001	4.9 (<10.0)	0.014		
Rule-Breaking Behaviour	409	3.8 (3.4-4.2)	347	4.7 (4.3-5.1)	0.001	3.5 (<9.0)	0.228	3.8 (<10.0)	<0.001		
Aggressive behaviour	424	9.2 (8.7-9.7)	352	7.3 (6.8-7.8)	<0.001	6.5 (<14.0)	<0.001	6.0 (<13.0)	<0.001		
Other problems	422	4.7 (4.5-5.0)	362	4.0 (3.8-4.3)	<0.001	-	-	-	-		
<b>Broadband scales</b>											
Internalizing	305	16.9 (15.7-18.1)	305	9.8 (9.0-10.6)	<0.001	11.6 (<19.0)	<0.001	8.3 (<14.0)	0.001		
Externalizing	391	13.0 (12.2-13.9)	318	12.0 (11.2-12.8)	0.081	9.9 (<16.0)	<0.001	9.8 (<17.0)	<0.001		

Number of observations, mean score, and p-values for comparisons between girls and boys, as well as to the ASEBA Normative Sample

<sup>1</sup>ASEBA Standard – multicultural normative samples group 2 adopted from the Achenbach and Rescorla (2007)

<sup>2</sup>Comparison between girls and boys from the study sample

<sup>3</sup>Normal range – given by the ASEBA for group 2

<sup>4</sup>Comparison between ASEBA Normative Sample and the study sample

As Table 10 illustrates, boys scored higher than girls in only *rule-breaking behaviour*, while girls obtained higher scores in all remaining syndrome scales of the YSR, including broadband

internalizing. Regarding broadband externalizing, both genders obtained similar mean scores. Participants who did not disclose their gender had mean scores equivalent to those of boys (internalizing 9.5; externalizing 10.7).

Both genders obtained higher than ASEBA Normative Sample scores. Boys from this sample scored similarly to ASEBA Normative samples only in *somatic complaints* and *thought problems*. The difference was greater among girls than boys.

### Subgroup analysis: Left-behind and non-left-behind children

In a sub-group analysis, I separately compared YSR syndrome scores and broadband scales between left-behind and non-left-behind adolescents. Table 11 illustrates the results.

**Table 11.** Youth Self Report - descriptive statistics for eight syndrome scales, broadband internalizing, and externalizing. Number of observations, mean scores, and p-values; comparisons between left-behind and non-left-behind children

Outcome	Left-behind		Non-Left-behind		p-value
	N	mean (95% CI)	N	mean (95% CI)	
<b>Empirically based syndromes</b>					
Anxious/ Depressed	211	5.6 (5.0-6.2)	488	5.7 (5.2-6.1)	0.8877
Withdrawn/ Depressed	243	4.7 (4.2-5.1)	543	4.8 (4.5-5.1)	0.6210
Somatic Complaints	220	3.7 (3.3-4.1)	516	3.4 (3.1-3.7)	0.2097
Social Problems	234	4.0 (3.6-4.3)	533	3.7 (3.4-4.0)	0.2770
Thought Problems	173	4.5 (3.9- 5.1)	401	4.1 (3.7-4.5)	0.2508
Attention Problems	239	5.8 (5.4-6.2)	547	5.9 (5.6-6.2)	0.6578
Rule-Breaking Behaviour	224	4.3 (3.8-4.8)	525	4.7 (4.3-5.1)	0.3819
Aggressive behaviour	236	8.8 (8.1-9.4)	530	8.1 (7.6-8.5)	0.0738
Other problems	236	4.4 (4.0-4.7)	541	4.43 (4.2- 4.6)	0.8182
<b>Broadband scales</b>					
Internalizing	184	13.1 (11.8-14.5)	421	13.4 (12.4-14.3)	0.8021
Externalizing	214	13.2 (12.1-14.3)	489	12.1 (11.4-12.7)	0.0802

YSR mean scores were similar between left-behind and non-left-behind adolescents in this study; thus, regardless of their parental migration, participants reported similar empirical syndromes and internalizing and externalizing problems.

### **3.3.3. Bivariable linear regression**

Table 12 illustrates the results of the Bivariable linear regression using broadband internalizing and externalizing scales in girls. The regression model showed significant associations between internalizing problems and not “performing in any sports”, “having less than three close friends”, “having problems at school”, and “having worse relationships with peers”; while “not having an illness” and “better relationships with peers/parents” were associated with lower internalizing problem scores among girls.

For the externalizing scale, associations were similar with the following variables: “not having an illness”, “fewer than three close friends”, and “better relationship with parents”. On the contrary, “not performing any sport” and having “better relationships with peers” showed no difference, while “better relationships with siblings” were associated with lower externalizing problems.

**Table 12.** Bivariable linear regression utilizing the broad internalizing and externalizing scales- results for girls. Source: (Antia et al. 2023)

Independent Variable	Internalizing		Externalizing	
	Coefficient (constant*)	p-value	Coefficient (constant*)	p-value
<b>Age group</b>				
12-13	Ref. (15.96)		Ref. (12.31)	
14-15	2.08	0.140	1.58	0.109
16-18	1.02	0.510	0.55	0.620
<b>Performing any Sport</b>				
Yes	Ref. (16.31)		Ref. (12.84)	
No	4.79	<b>0.008</b>	1.68	0.197
<b>Number of siblings</b>				
0	Ref. (17.88)		Ref. (13.48)	
1-3	- 0.98	0.615	0.18	0.896
4-5	1.32	0.730	- 2.79	0.297
≥6	- 6.88	0.381	- 8.98	0.150
<b>Doing chores</b>				
Yes	2.07		0.93	
No	Ref. (16.33)	0.126	Ref. (12.75)	0.329
<b>Having an illness</b>				
Yes	Ref. (27.35)		Ref. (17.68)	
No	- 11.26	<b>&lt;0.001</b>	- 5.19	<b>0.001</b>
<b>Number of close Friends</b>				
0	14.11	<b>&lt;0.001</b>	6.046	<b>0.021</b>
1-3	3.44	0.005	1.87	<b>0.032</b>
≥4	Ref. (14.71)		Ref. (11.77)	
<b>Having school problems</b>				
Yes	7.14	<b>&lt;0.001</b>	3.90	<b>&lt;0.001</b>
No	Ref. (14.59)		Ref. (11.58)	
Living with				
Mother only	2.51	0.226	2.69	0.064
Father only	- 5.60	0.067	- 2.87	0.189
Both parents	Ref. (16.75)		Ref. (12.87)	
<b>Relationship with peers (compared to peers)</b>				
Worse	8.41	<b>0.002</b>	3.82	<b>0.037</b>
Likewise	Ref. (19.15)		Ref. (13.51)	
Better	- 4.89	<b>&lt;0.001</b>	- 1.57	0.078
<b>Relationship with siblings (compared to peers)</b>				
Worse	3.89	0.249	2.65	0.226
Likewise	Ref (17.66)		Ref (14.00)	
Better	- 1.55	0.261	- 1.98	<b>0.043</b>
Do not have siblings	0.13	0.954	- 0.57	0.706
<b>Relationship with parents (compared to peers)</b>				
Worse	6.80	0.082	3.30	0.224
Likewise	Ref. (22.91)		Ref. (16.5)	
Better	- 8.16	<b>&lt;0.001</b>	- 4.97	<b>&lt;0.001</b>
<b>Having at least one migrant parent</b>				
Yes	- 1.02	0.445	1.47	0.107
No	Ref. (17.23)		Ref. (12.46)	
<b>Const.</b>				
<b>Adj. R<sup>2</sup></b>				

\*P-values of constants <0.001

Table 13 presents the results of the bivariable linear regression using broadband internalizing and externalizing scales in boys. Analysis for boys revealed significant associations between internalizing problems and having: “one to three siblings”, “less than three close friends”, “problems at schools”, and “worse relationships with peers”. In contrast, not “having an illness” and “better relationship with parents” were associated with lower internalizing problems.

In the bivariable regression model for boys, older age (16-18) and having school problems were associated with higher, and a better relationship with parents was associated with lower externalizing problems.

#### **3.3.4. Multiple linear regression**

The final data analysis steps were a collinearity check and multiple linear regression. I included all independent variables from the bivariable regression model into the multiple regression. Table 14 illustrates multiple linear regression results utilizing broadband internalizing and externalizing scales in girls.

Multiple regression analysis revealed that girls who obtained higher internalizing scores were also more likely to not “perform in any sports”, have fewer than “three close friends”, have “school problems”, and have “worse relationships with peers/siblings/parents”. In contrast, girls with lower internalizing scores were more likely to report having “better relationships with parents/peers” and having “no illness”. Table 15 presents these results.

**Table 13.** Bivariable linear regression utilizing the broad internalizing and externalizing scales- results for boys. Source: (Antia et al. 2023)

Independent Variable	Internalizing		Externalizing	
	Coefficient (constant*)	p-value	Coefficient (constant*)	p-value
<b>Age group</b>				
12-13	Ref. (10.35)		Ref. (10.10)	
14-15	- 1.07	0.274	2.76	0.005
16-18	- 0.51	0.623	3.30	<b>0.002</b>
<b>Performing any Sport</b>				
Yes	Ref. (9.63)		Ref. (11.86)	
No	2.82	0.093	1.22	0.438
<b>Number of Siblings</b>				
0	Ref. (8.32)		Ref. (11.90)	
1-3	2.50	<b>0.030</b>	- 0.16	0.891
4-5	2.35	0.443	3.77	0.249
≥6	4.35	0.303	- 2.56	0.570
<b>Doing chores</b>				
Yes	0.95	0.393	- 0.32	0.780
No	Ref. (9.66)		Ref. (12.06)	
<b>Having an illness</b>				
Yes	Ref. (15.94)		Ref. (14.94)	
No	- 6.55	<b>&lt;0.001</b>	- 3.21	0.081
<b>Number of close Friends</b>				
0	14.70	<b>&lt;0.001</b>	5.14	0.137
1-3	2.31	<b>0.013</b>	0.46	0.650
≥4	Ref. (8.90)		Ref. (11.86)	
<b>Having school problems</b>				
Yes	2.80	<b>0.007</b>	2.58	<b>0.015</b>
No	Ref. (9.26)		Ref. (11.34)	
<b>Living with</b>				
Mother only	2.04	0.192	0.40	0.794
Father only	0.95	0.621	0.33	0.867
Both parents	Ref. (9.80)		Ref. (11.87)	
<b>Relationship with peers (compared to peers)</b>				
Worse	8.12	<b>&lt;0.001</b>	- 0.60	0.804
Likewise	Ref. (9.96)		Ref. (12.42)	
Better	- 1.10	0.209	- 0.83	0.375
<b>Relationship with siblings (compared to peers)</b>				
Worse	4.71	0.078	4.60	0.055
Likewise	Ref. (10.29)		Ref. (12.67)	
Better	- 0.90	0.349	- 1.39	0.150
Do not have siblings	- 1.50	0.281	- 2.52	0.092
<b>Relationship with parents (compared to peers)</b>				
Worse	2.02	0.518	- 0.69	0.820
Likewise	Ref. (11.31)		Ref. (13.83)	
Better	- 2.11	<b>0.048</b>	<b>- 2.61</b>	<b>0.016</b>
<b>Having at least one migrant parent</b>				
Yes	0.08		0.71	0.449
No	Ref. (9.93)	0.932	Ref. (11.65)	
<b>Constant</b>				
<b>Adj. R<sup>2</sup></b>				

\*P-values of constants <0.001

**Table 14.** Multiple linear regression analysis utilizing the broadband internalizing and externalizing scales - results for girls. Source: (Antia et al. 2023)

Independent Variable	Internalizing		Externalizing	
	Coefficient (95% CI)	p-value	Coefficient (95% CI)	p-value
<b>Age group</b>		0.335		0.268
12-13	Ref.		Ref.	
14-15	1.61 (-2.16 - 5.37)		2.81 (0.05 - 5.57)	
16-18	-1.52 (-5.33 - 2.29)		0.19 (-2.71 - 3.09)	
<b>Performing any Sport</b>		<b>0.008</b>		0.197
Yes	Ref.		Ref.	
No	3.19 (-1.46 - 7.85)		-2.64 (-6.04 - 0.76)	
<b>Number of siblings</b>		0.740		0.329
0	Ref.		Ref.	
1-3	5.00 (-18.41 - 28.42)		7.92 (-4.86 - 20.71)	
4-5	9.85 (-14.34 - 34.04)		6.12 (-7.40 - 19.65)	
≥6	3.19 (-23.44 - 29.83)		0.22 (-16.55 - 16.99)	
<b>Doing Chores</b>		0.126		0.329
Yes	0.12 (-3.30 - 3.55)		-0.25 (-2.79 - 2.30)	
No	Ref.		Ref.	
<b>Having an illness</b>		<b>&lt;0.001</b>		<b>0.001</b>
Yes	Ref.		Ref.	
No	-6.17 (-12.79 - 0.46)		-2.85 (-6.96 - 1.26)	
<b>Number of Close Friends</b>		<b>&lt;0.001</b>		<b>0.015</b>
0	10.20 (1.85 - 18.56)		1.51 (-5.61 - 8.63)	
1-3	0.74 (-2.60 - 4.08)		-0.10 (-2.63 - 2.43)	
≥4	Ref.		Ref.	
<b>Having School problems</b>		<b>&lt;0.001</b>		<b>&lt;0.001</b>
Yes	4.69 (1.30 - 8.07)		1.24 (-1.26 - 3.74)	
No	Ref.		Ref.	
<b>Living with</b>		0.075		0.063
Mother only	-2.90 (-7.85 - 2.06)		0.68 (-2.76 - 4.13)	
Father only	0.08 (-8.48 - 8.64)		-4.45 (-10.70 - 1.80)	
Both parents	Ref.		Ref.	
<b>Relationship with peers (compared to peers)</b>		<b>&lt;0.001</b>		<b>0.007</b>
Worse	6.90 (-0.98 - 14.79)		1.49 (-3.68 - 6.66)	
Likewise	Ref.		Ref.	
Better	-4.01 (-7.39 - -0.63)		-2.16 (-4.70 - 0.37)	
<b>Relationship with siblings (compared to peers)</b>		<b>&lt;0.001</b>		0.051
Worse	6.36 (-15.40 - 28.12)		9.74 (-1.70 - 21.17)	
Likewise	Ref.		Ref.	
Better	0.39 (-3.48 - 4.27)		-0.88 (-3.68 - 1.92)	
Do not have siblings	6.03 (-17.48 - 29.54)		6.71 (-6.40 - 19.82)	
<b>Relationship with parents (compared to peers)</b>		<b>&lt;0.001</b>		<b>&lt;0.001</b>
Worse	5.32 (-8.18 - 18.81)		10.41 (1.89 - 18.93)	
Likewise	Ref.		Ref.	
Better	-7.15 (-11.41 - -2.89)		-3.23 (-6.29 - -0.19)	
<b>Having at least one migrant parent</b>		0.445		0.107
Yes	1.72 (-1.71 - 5.16)		2.77 (0.18 - 5.37)	
No	Ref.		4.61 (1.73 - 7.49)	
<b>Const.</b>	21.07 (-3.75 - 45.90)	0.095	9.65 (-4.61 - 23.91)	0.183
<b>Adj. R<sup>2</sup></b>	0.3371		0.1978	

**Table 15.** Multiple linear regression analysis utilizing the broadband internalizing and externalizing scales - results for boys. Source: (Antia et al. 2023)

Independent Variable	Internalizing		Externalizing	
	Coefficient (95% CI)	p-value	Coefficient (95% CI)	p-value
<b>Age group</b>		0.549		<b>0.003</b>
12-13	Ref.		Ref.	
14-15	-0.99 (-3.49 - 1.50)		1.51 (-1.29 - 4.32)	
16-18	0.95 (-1.85 - 3.75)		2.96 (-0.33 - 6.24)	
<b>Performing any Sport</b>		0.093		0.438
Yes	Ref.		Ref.	
No	1.43 (-2.67 - 5.54)		-0.83 (-5.60 - 3.93)	
<b>Number of Siblings</b>		0.163		0.600
0	Ref.		Ref.	
1-3	- 0.26 (-7.10 - 6.56)		0.70 (-8.33 - 9.72)	
4-5	4.00 (-4.72 - 12.72)		7.62 (-3.11 - 18.35)	
≥6	-1.84 (-11.89 - 8.20)		-2.75 (-14.94 - 9.43)	
<b>Doing chores</b>		0.393		0.780
Yes	0.26 (-2.44 - 2.96)		-1.90 (-5.05 - 1.25)	
No	Ref.		Ref.	
<b>Having an illness</b>		<b>&lt;0.001</b>		0.081
Yes	Ref.		Ref.	
No	-4.09 (-8.31 - 0.13)		-2.26 (-7.23 - 2.72)	
<b>Number of Close Friends</b>		<b>&lt;0.001</b>		0.311
0	25.91 (11.17 - 40.66)		-20.78 (-37.67 - -3.88)	
1-3	0.40 (-1.92 - 2.71)		-0.36 (-3.00 - 2.27)	
≥4	Ref.		Ref.	
<b>Having school problems</b>		<b>0.007</b>		<b>0.015</b>
Yes	3.64 (1.05 - 6.23)		3.58 (0.69 - 6.47)	
No	Ref.		Ref.	
<b>Living with</b>		0.395		0.794
Mother only	2.75 (-1.14 - 6.64)		-2.83 (-7.19 - 1.53)	
Father only	0.10 (-4.53 - 4.33)		-1.83 (-6.99 - 3.32)	
Both parents	Ref.		Ref.	
<b>Relationship with peers (compared to peers)</b>		<b>&lt;0.001</b>		0.672
Worse	7.08 (0.01 - 14.15)		7.35 (-1.83 - 16.53)	
Likewise	Ref.		Ref.	
Better	-1.89 (-4.15 - 0.36)		-0.72 (-3.27 - 1.83)	
<b>Relationship with siblings (compared to peers)</b>		0.126		<b>0.024</b>
Worse	-4.99 (-16.81 - 6.84)		-6.59 (-17.40 - 4.22)	
Likewise	Ref.		Ref.	
Better	-1.88 (-4.43 - 0.66)		-1.76 (-4.70 - 1.17)	
Do not have siblings	-2.50 (-9.62 - 4.62)		-2.36 (-11.42 - 6.70)	
<b>Relationship with parents (compared to peers)</b>		0.068		0.050
Worse	-3.61 (-14.59 - 7.36)		3.99 (-7.21 - 15.18)	
Likewise	Ref.		Ref.	
Better	-0.47 (-3.48 - 2.53)		-1.66 (-5.04 - 1.72)	
<b>Having at least one migrant parent</b>		0.932		0.449
Yes	0.27 (-2.27 - 2.80)		4.61 (1.73 - 7.49)	
No	Ref.		Ref.	
<b>Constant</b>	15.63 (7.07 - 24.20)	<0.001	13.15 (2.09 - 24.22)	0.020
<b>Adj. R<sup>2</sup></b>	0.3177		0.1195	

The regression analysis showed that boys having higher internalizing scores were more likely to report having fewer than “three close friends”, “school problems”, and “worse relationships with peers”. Contrary, boys with lower internalizing scores were more likely to report “having no illness” and “better relationships with peers”. Regarding externalizing, the regression analysis revealed an association between high externalizing scores and ages 16 to 18.

### **3.4. Left-behind children’s experience, coping with migratory separation and resilience**

This section presents the results of the qualitative study with schoolchildren corresponding to study objective (iv) exploring children’s experience and feelings about their parent(s)’ migration; children’s perception in terms of their health and mental well-being status, their coping and resilience.

#### **3.4.1. Sample characteristics**

The study sample consisted of 39 adolescents aged 12 to 18, among which 29 had at least one parent, currently migrating abroad or who has recently returned from migration due to the COVID-19 pandemic, and ten of their classmates whose parents were not migrants by the time of data collection. Table 16 presents the detailed characteristics of the participants.

**Table 16.** Characteristics of participants: gender, age, parental migration profile

<b>Left-behind</b>		<i>N</i>	<i>%</i>
<i>Gender</i>			
	Girl	19	65.5
	Boy	10	34.5
<i>Age group</i>			
	12-13	16	55.2
	14-15	11	37.9
	16-18	2	6.9
<i>Migrant parent</i>			
	Mother	11	37.9
	Father	14	48.3
	Both	4	13.8
<i>Migration status</i>			
	Current migrant	26	89.7
	Recently returned	3	10.3
<i>Country of migration</i>			
	Turkey	8	24.2
	Poland	6	18.2
	Germany	5	15.2
	Italy	5	15.2
	Greece	3	9.1
	Russia	3	9.1
	Israel	2	6.0
	Ukraine	1	3.0
<b>Non-left-behind</b>			
<i>Gender</i>			
	Girl	9	90%
	Boy	1	10%
<i>Age group</i>			
	12-13	6	60%
	14-15	3	30%
	16-18	1	10%

More than half of the left-behind children belonged to the 12-13 age group, more than a third were 14-15 years old, and less than 10% belonged to the 16-18 age group. Fathers' migration (48.3) was more common than mothers' (37.9%), and both parents' migration was the least common (13.8%). Interviewed adolescents reported that most migrant parents remained in migration (89.7%), while few recently returned due to the COVID-19 pandemic (10.3%). The participants named Turkey,

Poland, Germany, and Italy as hosting countries for their migrant parents, and fewer children mentioned Russia, Israel, and Ukraine.

All non-left-behind adolescents I interviewed were classmates of the left-behind adolescents participating in the study. Only one out of ten was a boy, and six participants belonged to the 12-13 age group; three were 14-15 years old, and only one was in the 16-18 age category.

Through the reflexive thematic analyses, I identified four central themes: (i) the time dimension, (ii) family connectedness, (iii) positive attitudes and self-care, (iv) friends, school, and social interactions. Figure 8 presents each theme and sub-theme.

<p><b>Theme 1.</b> The time dimension</p>	<ul style="list-style-type: none"> <li>•Age at separation and length of separation</li> </ul>
<p><b>Theme 2.</b> Family connectedness</p>	<ul style="list-style-type: none"> <li>•Online communication and parents' regular visits</li> <li>•Closeness with remaining parent and family members</li> </ul>
<p><b>Theme 3</b> Positive attitudes and self-care</p>	<ul style="list-style-type: none"> <li>•Directing attention to something else and self-encouragement</li> <li>•Becoming independent and material benefits</li> </ul>
<p><b>Theme 4</b> Friends, school and social interactions</p>	<ul style="list-style-type: none"> <li>•Closeness with other left-behind children and friendships</li> <li>•School environment or school stress</li> </ul>

**Figure 8.** Main themes with the respective subthemes derived from thematic analysis

### 3.4.2. Theme 1. The time dimension

#### Age at separation and length of separation

By analysing the data, I found that children whose parent(s) left when they were toddlers describe themselves as resilient. In contrast, at 6–10, children are deeply affected and vulnerable. For

example, one of the participants recalled his emotions related to his parents' migration in his early childhood:

*“It is normal for me; I do not express any emotions. For many years, my parents have been coming and going, I was not even born when my father first left to work there”.*  
*Boy\_13\_both\_parents\_migrants*

Time spent apart impacts how children experience and handle the separation. Those with recently immigrated parents may not be aware of how parental absence feels; the emotional impact of separation may not yet be felt. Coping seems to require time for the left-behind children, but they eventually learn coping skills and adjust to the new situation. In the following quote, one adolescent girl shared her experience:

*“When my dad left, my siblings and I were in bed for three days; we did not even want to talk to anyone. Then, slowly, we started to talk to Mom and Dad, and we talked about how he would come soon, and time went fast and, gradually, we got used to it”*  
*Girl\_14\_migrant\_father*

### **3.4.3. Theme 2. Family connectedness**

#### **Open communication and parent's regular visits**

In the schoolchildren's perception, their migrant mothers' assurances that they will be happy in the future foster a sense of community. Online contact can even strengthen parent-child bonds. For example, one of the participants voiced:

*“This distance does not separate us; the opposite, it brings us closer”.* *Boy\_15 both\_parents\_migrants*

The study found that when children temporarily separate from their parents, they value time spent with them more. Then, when parents surprise them and visit on special days, such as a child's birthday, the New Year, Easter, or any significant event, it makes children happy and excited. Such special events and a sense of community encourage children to communicate more openly with

their parents. From the participants' perspective, it also helps them overcome the sadness brought on by separation.

Even though most children feel better when their parents visit them, the repeated separation causes even stronger sentiments for some, especially girls. For instance, in the following quote, one of the teenage girls voiced:

*"When my mom came back, I was so shocked from happiness; I thought she would come back forever and never leave; Then, I learned that it was only a short-term visit, and she would leave again. When this time came, I felt twice as intense as when she left for the first time. I knew I would miss her twice as much as I missed her before".*  
*Girl\_14\_migrant\_mother*

### **Closeness with remaining parent and family members**

In migrant families, the remaining parent becomes the emotional supporter of the children. For example, children of migrant fathers share their feelings with the mother. Experiencing the situation together helps both the mother and the child(ren) to adapt to the new reality, with the mother easing the situation for the child. Similarly, when mothers are migrants, remaining fathers become emotional supporters and get involved in household activities such as cooking with children. They feel boosted by a closer relationship with the father after the mother's departure. This is particularly highlighted by girls, who positively reflect on a deeper relationship with the father:

*"When mom left, I shared everything with my dad; this separation was also challenging for him. We decided not to talk about our emotions with Mom because we knew she would worry about us and miss us even more. Talking with each other helped us both".*  
*IDI\_girl\_14\_migrant\_mother*

In the absence of parent(s), children with siblings offer support to each other, which helps them overcome difficult times related to separation. Children consider older siblings as especially caring. For example, one of the adolescent boys reported:

*“When my parents went abroad, my sister was with me, and I have not felt that bad; I am very close to my sister; we never had a conflict. If not my sister, I would be aggressive and not as loving as I am now. This event is not difficult to overcome when you have a loving family”. Boy\_15\_both\_parents\_migrants*

Along with the parents and siblings, the study identified that caregivers play a crucial role in transnational families. Most participants stressed that confiding in their grandparents helps them cope. They also commented on the commitment, care and support received from grandmothers. To express appreciation towards their caregivers, one of the adolescents voiced:

*“My grandparents took excellent care of my siblings and me. They did it as well as our parents could do. They provided us with everything we needed.” Girl\_13\_migrant\_father*

#### **3.4.4. Theme 3. Positive attitudes and self-care**

##### **Directing attention to something else and self-encouragement**

The study participants engage in various activities to overcome feelings of missing parents and build resilience. They regularly mentioned activities such as painting, reading, and keeping diaries, and playing and listening to music. Most participants also named watching their favourite movies to divert their focus from distressing feelings. Some schoolchildren shared that walking, performing in sports, and cycling help them to cope with stress.

The data analysis also shows that some adolescents would rather keep their thoughts and feelings to themselves and try to manage their emotions independently. Few participants feel better when dealing with overwhelming feelings through self-talk and self-reflection. To emphasize this aspect, one of the participants expressed:

*"My family tries to calm me down. I am told that my parent's migration is important for my well-being; however, I still want to think about and deal with these issues alone. To isolate and go deeper into my thoughts for several days helps me better than listening to my family members' explanations". Girl\_14\_migrant\_mother*

Some left-behind adolescents have enough inner resources to encourage themselves; they call it “inner encouragement”. The participants are convinced that patience and not worrying too much would make them stronger. Self-encouragement helps children control their emotions and live like it is a “normal life”; they maintain a positive mindset and live with the hope that this will be over soon. In adolescents’ view, in the absence of their parents, they are responsible for entertaining themselves and finding joy on their own.

The study found that not perceiving parents’ migration as “disastrous” helps children become resilient. They believe they cannot avoid feeling sad and missing their parents; however, they are aware that too many emotions may lead to mental health problems and are trying to get used to this reality without damaging their health.

To highlight this, one of the boys shared:

*“I keep telling myself, please, stop worrying, calm down, and everything will be fine. Go out and do something, do something that makes you forget how much you miss your mom.”*

*Boy\_12\_migrant mother*

### **Becoming independent and material benefits**

Most participants acknowledge becoming more independent after their parents’ migration. They view the experience of having to cope on their own as preparing them for becoming university students. Being optimistic and seeing the positive side of parental absence boost children’s confidence and help them to cope well. Even though adolescents perceive migratory separation as a challenging life experience, they think they will be more prepared for future challenges if they can overcome this early on. Focusing only on the positive sides and completely ignoring the negative is a strategy some children successfully apply.

Appreciating the material benefits of parental migration is another coping technique I identified through data analysis. Most interviewed schoolchildren acknowledge that their lives have improved since their parents moved away; they can now participate in more extracurricular activities, including sports, dance, and music classes. The participants have access to computers, printers, and other electronic equipment that help them to prepare study materials. Being able to

get fully involved in all activities that require financial resources helps children to cope better. In the following quote, one of the teenage girls voiced:

*“Everything has improved. Our dreams started to come true in financial and other aspects. Our life started to progress.” Girl\_14\_migrant\_father*

In the children’s perception, migration is difficult, and they respect their parents’ feelings. The following quote voices this opinion:

*“If parents sacrifice their life because of us, we also must make some sacrifices.” Girls\_14\_migrant\_mother*

Another factor that makes children happy is seeing how content and joyful their parents are when they can send remittances home. Most participants believe their parents’ migration abroad is essential for their future. This understanding enables children to cope and become resilient, as demonstrated by the adolescent whose both parents immigrated:

*“Since I know that my mom and dad are abroad because of me, I must become a better person. Some kids do not understand that and tend to waste the money their parents send on cigarettes and such things. I will never do that,” Boy\_15\_both\_parents\_migrants*

Focusing on their studies is one of the coping strategies for left-behind children. The participants express feeling gratified when their academic successes make their parents happy. Adolescents assess the economic situation as necessitating the parents’ migration and accept the reality. They are aware that due to the economic and political situation in the country, many other children, their classmates, neighbours, and relatives have migrant parents. Not feeling alone as a left-behind child helps in coping with the situation.

### **3.4.5. Theme 4. Friends, school, and social interactions**

#### **Closeness with other left-behind children and having friends**

Through the analysis, I found that children of migrating parents have a good understanding of one another, making it easier for them to converse about their migratory separation experiences. This

support seems especially crucial for those experiencing a parent's migration for the first time. For example, one of the teenage girls shared a story of her classmate whose mother migrated to Italy; the girl herself has a migrant mother. Since she had already experienced separation from a mother, she supported her classmate to overcome this pain; she shared:

*"We feel the same pain [...] Sometimes when she cries a lot, I ask her to go for a walk, and we walk together and talk; I think this talk helps her"* Girl\_13\_migrant\_mother

The study found that left-behind children get satisfaction not only from interacting with other children of migrants but also through participating in social activities and spending more time with friends. The participants consider that having good friends makes their feelings of loss, loneliness, and sadness less intense. In the following quote, one of the adolescent boys expressed:

*"When I am in a bad mood and want to stay in my room all the time, my friends come to my house and try to cheer me up. Sometimes they bring some games, we play, and eventually, my mood gets much better"*. Boy\_12\_migrant\_father

### **School environment**

The school environment is one of the central aspects of positive or negative coping for most adolescents in this study. In the participants' view, school life, activities, and meeting classmates and teachers help them to cope better. By being in school, they shift their attention to something more joyful. However, some also experience problems at school, such as bullying, conflicts with teachers and classmates, pressure, and stress due to the high demand to complete all schoolwork and study well. In such situations, some adolescents isolate themselves and do not share their feelings, and coping with negative emotions becomes challenging for them.

### **Non-left-behind children**

This study found that non-left-behind and left-behind adolescents have similar coping strategies; for example, when they experience stressful life events, family members (especially parents, grandparents, and older siblings) and friends help them to cope and improve their mood.

Classmates of the left-behind adolescents perceive parents' migration as stressful. They view left-behind children's lives as more challenging than those who live with both parents; they also acknowledge difficulties in online communication; in their view, it is difficult to share emotions and receive needed warmth from such a distance. However, they also highlight that most children have supportive families, and eventually, parents will return, and families will be happy again.

It seems children of migrants sometimes share with their non-left-behind classmates their feelings about missing parents and their dreams of family reunions. Regarding parents' motivation to migrate, all participants view poverty and aspirations to improve their children's living conditions as the primary motivation. Some non-left-behind adolescents have best friends who have migrant parents. They describe themselves as supportive, meaning their support helps their friends to cope with negative emotions such as sadness and loneliness caused by migratory separation. The participants also notice their classmates' change in mood after the migration of a parent; for example, one of the non-left-behind classmates expressed:

*"I am noticing changes after the father of my best friend left. She is different now; she was calmer before; I think she has changed, she was always happy and in a good mood before, but now, she looks tired and unhappy. I have seen her crying when talking to her dad on the phone. It was emotional that I almost cried. She worries a lot, which is why her mood has changed". Girl\_15*

When discussing the potential benefits of migrant labour, some interviewed adolescents acknowledge that their classmates of migrants are materially better off. However, some also argue that they are similar in a socio-economic context. From the participants' views, those who have migrant parents appreciate their parents more, love them more and respect them more because their parents' absence makes them understand what it means to have their parents close. One of the participants described this with the following words:

*"My classmate whose both parents are migrants looks happy; she smiles a lot and has a positive worldview: I could not imagine myself being happy without having parents with me. I could not explain how my classmate managed to remain positive. However, then, I*

*realised that children of migrants still have reasons to appreciate what they have, to remain hopeful and to smile every day". Girl\_14*

Adolescents view their classmates as happy when their migrant parents visit during holidays; however, they also notice sadness when their parents leave again. Sometimes they find it challenging to encourage their classmates who experience separation from their parents because those who live with both parents fear not knowing how separation feels. They view other children of migrants as the best supporters of each other because they share the same painful experience.

### 3.5. Mixed methods – integrated results

Table 17 illustrates mixed methods integrated results.

**Table 17.** joint display of mixed methods results exploring effects of labour migration in Georgia

<b>Quantitative:</b>	<b>Qualitative</b> ( <i>Theme/sub-theme Quote</i> )	<b>Integrated results</b>
Left-behind and non-left-behind adolescents obtained similar YSR mean scores (e.g., internalizing problem mean score - LBC 13.1; CI - 11.8-14.5; non-LBC 13.4; CI- 12.4-14.3, <i>P value</i> -0.8021).	<p data-bbox="688 520 1008 548"><b>Health impact of separation</b></p> <p data-bbox="558 583 1101 730"><i>“When they are little, they miss their parents a lot. They need warmth. They come and hug us all the time, they seek mothers in us, but when they get older, they try so hard not to show it, they lock themselves inside.”</i> FGD_A_9</p> <p data-bbox="558 766 1127 913"><i>“When my dad left, my siblings and I were in bed for three days; we did not even want to talk to anyone. Then, slowly, we started to talk to mom and dad, and we talked about how he would come soon, and time went fast and, gradually, we got used to it”</i> Girl_14_migrant_father</p> <p data-bbox="558 982 1117 1066"><i>“If parents sacrifice their life because of us, we also must make some sacrifices.”</i> Girls_14_migrant_mother</p> <p data-bbox="558 1102 1133 1228"><i>“It is normal for me; I do not express any emotions. For many years, my parents have been coming and going, I was not even born when my father first left to work there”.</i> Boy_13_both_parents_migrants</p> <p data-bbox="558 1264 1127 1381"><i>“I am noticing changes after the father of my best friend left. [...] She was always happy and in a good mood before, but now, she looks tired and unhappy”.</i> Non-LBC_girl_15</p>	Overall results show that teachers and children perceive their health differently; separation from parents is a stressful life experience for children; however, how this life event impacts a child’s health and well-being is both complex and multifactorial, with other factors playing a role.
Compared to boys, girls in the study, regardless of their parental migration, obtained higher YSR syndrome scores as well as internalizing problem scores (internalizing mean girls 16.9; CI 15.7-18.1; boys 9.8, CI 9.0-10.6; <i>P value</i> <0.001) Boys expressed more rule-breaking behaviour than girls (mean girls 3.8; CI- 3.4-4.2; boys 4.7; 4.3-5.1, <i>P value</i> <0.001).	<p data-bbox="672 1415 1024 1442"><b>Impact of gender on separation</b></p> <p data-bbox="558 1478 1122 1562"><i>“Girls whose mothers migrated need to help their grandmothers with household chores, taking care of their younger siblings, and cooking.”</i> FGD_B_3</p> <p data-bbox="558 1598 1117 1808"><i>“I have two boys in my class who have migrant fathers. They need to take their fathers’ responsibilities and perform so-called “male-tasks” such as farm work, helping mothers in the field; during harvesting season, boys miss schools for this reason, and it also affects their grades, their academic performance worsens.”</i> FGD_E_2</p>	Overall, findings suggest gender differences in how children perceive their parent’s migration. Girls and boys are affected differently, and the impact also depends on which parent migrates. Overall, all girls in the study show more significant internalizing problems, and boys express more rule-breaking behaviour.

Quantitative:	Qualitative (Theme/sub-theme Quote)	Integrated results
	<p><i>“He was such a talented, well-disciplined child, but separation overshadowed everything. He became aggressive. Even involvement of the police was necessary, and currently, he is under the constant supervision of the school and the police.”</i> IDI_D</p>	
<p>Regardless of parental migration, multiple linear regression showed an association between adolescents’ internalizing/externalizing and experiencing problems at school.</p>	<p><b>Role of schools</b></p> <p><i>“We, teachers, feel what the problems are and try to resolve them so that something fatal does not happen. We use different techniques. We also try to read psychological literature and provide psychological help to these children. Today, this is the foundation of our success. All of us do this individually and by sharing”.</i> FGD_A_9</p> <p><i>“Being at school is something happier.”</i> LBC_boy_12</p> <p><i>“I do not have a good relationship with most of my classmates and some of the teachers, I experienced bullying at school, and it was terrible. Since then, I do not trust anyone, and I do not share my feelings with anyone”</i> LBC_girl_14</p>	<p>Overall results show that a supportive school is crucial for adolescents’ well-being. A friendly school environment helps children/adolescents become more resilient and cope with migratory separation. In contrast, a less supportive school is related to greater emotional and behavioural problems and negative coping.</p>
<p>Adolescents in the study, regardless of their parental migration, reported less emotional and behavioural difficulties when they had better relationships (compared to their peers) with their parents and siblings.</p>	<p><b>Family connectedness</b></p> <p><i>“This distance does not separate us; the opposite, it brings us closer”.</i> Boy_15 both_parents_migrants</p> <p><i>“When mom left, I shared everything with my dad; this separation was also challenging for him. [...] Talking with each other helped us both.”</i> IDI_girl_14_migrant_mother</p> <p><i>“When my parents went abroad, my sister was with me, and I have not felt that bad; [...] If not my sister, I would be aggressive and not as loving as I am now. This event is not difficult to overcome when you have a loving family.”</i> Boy_15_both_parents_migrants</p>	<p>Qualitative and quantitative study findings converge on the role of a relationship within the family in children’s well-being. Overall results reveal that closeness within the family leads left-behind adolescents to better well-being outcomes.</p>
<p>Adolescents in the study, regardless of their parental migration, expressed more emotional and behavioural difficulties when they had less than three close friends.</p>	<p><b>Friendships and social interactions</b></p> <p><i>“When I am in a bad mood and want to stay in my room all the time, my friends come to my house and try to cheer me up. Sometimes they bring some games, we play, and eventually, my mood gets much better”.</i> Boy_12_migrant_father</p> <p><i>“We feel the same pain [...] Sometimes when she cries a lot, I ask her to go for a walk, and we walk together and talk; I think this talk helps her”</i> Girl_13_migrant_mother</p>	<p>Qualitative and quantitative study findings converge on the role of friendship in children’s well-being. Overall results suggest that having friends, especially those with similar migratory separation experiences, is linked with better well-being outcomes and resilience.</p>

## **4. DISCUSSION**

This mixed methods study identified the health and well-being needs of left-behind children in Georgia from the perspective of schoolteachers and children of migrant and non-migrant parents. An in-depth understanding was gained by (i) examining the impact of parental migration on left-behind children through a systematic review of the literature, (ii) qualitatively exploring schoolteachers' perceptions and perspectives on left-behind children in Georgia, (iii) quantitatively assessing parental labour migration effects on children's mental well-being in Georgia, and (iv) qualitatively exploring children's experiences about their parent(s)' migration, their coping and resilience. Overall, the study findings suggest that parental migration affects left-behind children in Georgia. The impact on children is complex and depends on individual and transnational family characteristics. The below sections discuss the key findings in more detail.

This chapter consists of seven sections. Following the research objectives, sections 4.1-4.4 discuss the key findings of each study, and section five summarizes the integrated results of individual studies. The final two sections discuss each study's strengths and limitations as well as implications for future research and policies.

### **4.1. Impact of international migration on mental health and well-being of left-behind children**

This study examined the impact of international labour migration on left-behind children's mental health and well-being with a systematic review of the existing literature. The study found that the gender and age of a child, the gender of a migrant parent, and caregiving practices in different regions/countries influence the results. For example, evidence from the Americas and South Asia suggests a definite adverse effect of parental absence on children. In contrast, studies from other labour migrant-sending countries found that effects vary from unfavourable to favourable. Despite millions of children living in transnational households in many low and middle-income settings,

the research on the impact of migratory separation on children is still limited to primarily internal rural-urban migration in China.

In line with this study's findings, other scientists beyond transnational family research have highlighted that cultural aspects, child-parent relationship and family structure impact child mental health and well-being (Bass and Warehime 2011; Cullins and Mian 2015; Dinisman et al. 2017; Navarro et al. 2017; Speyer et al. 2022). For example, a study by Fomby and Cherlin suggested that structural changes in the family, including parental divorce and unstable parental relationships, influence children's cognitive development in the United States (Fomby and Cherlin 2007). Another group of researchers investigated relationships between family and child well-being outcomes across ten countries and found that children living with both parents, who are in stable relationships, are more satisfied with life than children living in single-parent or separated families; the results were consistent across other countries (Dinisman et al. 2017). Even though these studies (Bass and Warehime 2011; Dinisman et al. 2017) address changes in family structure in general, parental migration is one of the various forms of family separation, and these conclusions also apply to left-behind children. Some scholars also explored this issue in qualitative research and identified the parent-child relationship as central to young people's well-being (Bradshaw et al. 2007; Navarro et al. 2017). The UNICEF echoes these findings and states, "A child should grow up in a family environment, in an atmosphere of happiness, love and understanding" (UNICEF 1989).

With the differing mental health and well-being outcomes of left-behind children across continents/countries, this study highlights the complexity of transnationalism and child well-being in general. Existing transnational family research underscores this complexity (Hoang et al. 2012; Mazzucato and Schans 2011; Shih 2015; Vertovec 2001). Some authors qualitatively explored the impact of transnationalism on left-behind children from the perspective of caregivers/children (Hoang and Yeoh 2012; Hoang et al. 2012). For example, Hoang and colleagues interviewed women caregivers of left-behind children in Southeast Asia and found that traditionally in this region, it is usual for grandparents, especially maternal grandmothers, to provide care to children even without parental migration (Hoang et al. 2012); therefore children get emotionally attached to non-parent caregivers regardless of the parent's migration. Similarly, other scholars suggest that

in some African countries, child fosterage is a culturally accepted norm; thus, children may have non-parent caregivers, even when a parent is not migrating (Mazzucato and Cebotari 2017). In contrast, families are primarily nuclear in the Americas, especially in Mexico, where parents take the main caregiving responsibilities (Heymann et al. 2009). Adult caregivers' attitudes towards left-behind children in transnational households may also differ. These cultural variances in transnational families across regions can explain differing mental health and well-being outcomes of children living in migratory separation.

This systematic review found that cultural norms influence gender perceptions and caregivers' attitudes toward children. In some countries, such as Mexico and Ghana, societies perceive men as the breadwinner and a woman as the primary caregiver for children and other family members (Wu and Cebotari 2018). This cultural norm may have changed because more women started to seek employment abroad; this process is also called the *feminization of labour migration* (Apatinga et al. 2022; Beazley et al. 2018; Cortes 2015). A qualitative study by Apatinga and colleagues confirmed this transition in Ghanaian society, where female labour migration is becoming increasingly common (Apatinga et al. 2022). The authors explored perceptions of migrant women's spouses and found that they acknowledge changes after their wife's migration, such as improved living conditions (Apatinga et al. 2022). Mothers' migration may impact children in various ways. For example, in African countries such as Ghana, children of migrant mothers show vulnerability because fathers demand children, particularly girls, to perform household chores, including cleaning the house and cooking or caring for younger siblings (Wu and Cebotari 2018).

Overall, the results of this systematic review imply that girls living in transnational households are more vulnerable than boys. In line with this finding, existing research on child and adolescent mental health highlights that girls (in general) are more likely than boys to develop mental illnesses in the future (Alves et al. 2011; Zahn-Waxler et al. 2000). Despite all efforts, it is still unclear how mothers' or fathers' migration influence children's well-being or how left-behind boys and girls are affected by separation from each parent. These issues need to be better addressed in future research.

This study focused on children whose parents migrated internationally. As noted above, previous research mainly addressed China's internal rural-urban migration (Chai et al. 2019; Wang et al.

2019; Zhou et al. 2015). Unlike differing mental health and well-being outcomes found in this study, evidence from China suggests that parental absence negatively impacts children (Cheng and Sun 2015; Ding et al. 2019; Wang et al. 2019). For example, a systematic literature review by Cheng and Sun found a higher prevalence of anxiety and depression among those left-behind compared to those living with both parents (Cheng and Sun 2015); the authors identified other contributing factors, such as relationships within the family, duration of separation, children's gender and age. In line with studies on international parental migration, research by Su and colleagues identified the parent-child relationship as central to children's well-being (Su et al. 2013). Another group of authors (Chai et al. 2019) performed a meta-analysis of 51 studies and found that loneliness is highly prevalent in Chinese left-behind children, primarily due to social anxiety. The authors further contend that left-behind boys are more vulnerable and lonelier than girls, which contradicts the conclusions of this systematic review, suggesting higher vulnerability among girls from internationally migrating parents. These contradictions again highlight the complex nature of transnationalism and child well-being, especially when considering cultural differences.

#### **4.2. Schoolteachers' perceptions of labour migration and left-behind children**

This qualitative study explored schoolteachers' perceptions and perspectives about left-behind children and their families in Georgia. The study found that teachers view parental migration as a stressful, traumatizing life event, making children vulnerable to physical and mental health issues, including unhealthy eating habits, anxiety, stress, depression, loneliness, aggression, lack of connections and worsened academic performance. The participants perceive girls as more vulnerable than boys. Material benefits of migrant labour seem more evident in urban areas, while left-behind children from rural public schools are perceived as equally poor as their non-left-behind classmates. From teachers' perspective, socio-economic aspects such as poverty and conflicts in the family push parents to migrate; long separation sometimes leads to divorce. The study identified communication challenges between teachers and parents/caregivers; parents sometimes demand that schools take on parenting/caregiving responsibilities for their left-behind children. Schoolteachers view themselves as primary advocates for left-behind children and their

families; however, they also acknowledge the need for external support, such as psychological counselling services in schools and monitoring of left-behind children.

Similar to this study's findings, research from Lithuania and Romania highlights that parental absence has detrimental effects on children's mental health and well-being (Botezat and Pfeiffer 2020; Leskauskas et al. 2020; Tomşa and Jenaro 2015). Romanian left-behind children are prone to anxiety and depression (Tomşa and Jenaro 2015), and Lithuanian children face more emotional and behavioural difficulties than their non-left-behind peers (Leskauskas et al. 2020). In contrast, studies examining this issue in other Eastern European countries such as Georgia and Moldova argue that children of migrants are similar to or better off than their peers and that they are more satisfied with their lives (Cebotari et al. 2018b; Gassmann et al. 2018; Vanore 2016). Schoolteachers in this qualitative study perceive left-behind children as vulnerable. This conclusion only partially reflects available evidence from Eastern Europe. Notably, all existing studies from this region used quantitative measures and parent or caregiver reports on children. This study shows that schoolteachers' perspectives of how children experience their parents' migration could differ.

Although research on left-behind children's health is mainly quantitative, some authors qualitatively explored this issue in China, Ecuador, Greece and Kyrgyzstan (Anagnostaki and Zaharia 2020; Critelli et al. 2021; Murphy 2022; Zhang 2018; Zhao et al. 2018); these qualitative findings emphasize the views of Georgian schoolteachers. For example, by interviewing children of migrant and non-migrant parents, the study by Zhao and colleagues concludes that separation from parents traumatizes children in rural China and makes them prone to mental illnesses (Zhao et al. 2018). Alongside teachers' views, children separated from migrant parents in China call for external support and care (Zhao et al. 2018). Some scholars from Greece took a psychoanalytic approach and interviewed adults who experienced parental migration during their childhood (Anagnostaki and Zaharia 2020). Like children in rural China, Greek adults perceived migratory separation experience as traumatizing; some even developed psychopathologies in adulthood (Anagnostaki and Zaharia 2020). Left-behind adolescents in Ecuador view supportive family and relationships with parents/caregivers as essential for their well-being and coping; however, they also acknowledge stress and loss due to parental absence (Jerves et al. 2018). Similarly, left-behind

children in China (Murphy 2022) and Thailand (Rose-Clarke et al. 2022) identified quality of care and a supportive environment as crucial for their positive coping, resilience and sense of security. All studies discussed here interviewed children, parents, or caregivers; schoolteachers' perspectives about left-behind children still need to be explored in other migrant-sending countries.

This qualitative study highlights that children in transnational households live complex lives. Predominantly quantitative research from other countries reflects this complexity. For example, a group of authors conducted systematic literature reviews to examine the health impacts of migrant labour on children; findings suggest that children separated from migrant parents are susceptible to anxiety, depression, loneliness, and other mental health disorders (Chai et al. 2019; Cheng and Sun 2015; Fellmeth et al. 2018). However, not all studies show adverse impacts of migrant labour. Even though many low and middle-income countries send migrant workers abroad, research on left-behind children mainly originates from China, where parents migrate internally (rural-urban). Alongside qualitative research, existing quantitative studies include adult caregivers, parents, and children, while school perspectives are largely excluded.

Although schoolteachers perceive left-behind children as vulnerable, this study also shows some advantages in migrant labour. Urban schoolteachers argue that children benefit from remittances, which also help them cope with stress and missing parent(s). This study found that labour migration is an opportunity for particularly rural families to survive poverty. Research from other countries, including Mexico (Antman 2012), Moldova (Gassmann et al. 2018), and the Philippines (Asis 2006), have long recognised the economic advantages of migrant labour (e.g. improved living conditions, access to healthcare, private schooling and university education). However, several studies from Africa and Eastern Europe also imply that children from migrant and non-migrant families living in rural areas are similarly disadvantaged because remittances are used to meet family's essential needs (Cebotari et al. 2017; Cebotari et al. 2018b).

Efforts to develop and maintain warm relationships with children could also help them overcome the challenges of migratory separation; schools may play a crucial role in this. Nevertheless, this study also emphasises that other institutions consider addressing Georgian left-behind children's needs unnecessary.

### **4.3. Left-behind children's self-reported emotional and behavioural problems**

This study examined schoolchildren's problem behaviours using ASEBA Youth Self Report (YSR) in Georgia. The study found that regardless of their parental migration status, schoolchildren in Georgia experience emotional and behavioural difficulties. Compared to the US normative sample, adolescents in this study report greater YSR problems. The study also revealed a gender gap, with boys exhibiting more rule-breaking behaviour and girls performing worse on most YSR syndrome scores. The study identified the following factors associated with adolescents' problem behaviours: relationships with parents, peers and siblings, friendships, and school problems.

The study suggests that schoolchildren of migrant and non-migrant parents experience similar emotional and behavioural problems in Georgia. This finding partially contradicts existing evidence from Eastern Europe and internationally. For example, this issue is most researched in China, where evidence suggests the adverse effects of migratory separation on children; children of migrants show higher levels of anxiety, depression and loneliness (Ding et al. 2019; Fellmeth et al. 2018; Wang et al. 2015b). Similar to China, studies from some Eastern European countries, such as Romania (Tomşa and Jenaro 2015) and Lithuania (Leskauskas et al. 2020), highlight only the negative impact of parental absence on children. In contrast, research conducted in Georgia and Moldova indicates that children from transnational families have similar or even better mental health and well-being indicators than children from non-migrant families (Cebotari et al. 2018b; Gassmann et al. 2018; Vanore 2016). The contradicting findings across studies could be explained from several perspectives. This study reflects self-evaluated mental health outcomes of children aged 12 to 18, whereas other studies mainly involve children of all ages (0–18). Children below 11 can be more susceptible to adverse mental health outcomes due to parental absence. Existing studies used different informants (parents, caregivers, children) to assess children's mental health and well-being. Adults' evaluations may differ from children's self-reports. Other factors, such as relationships within the family, caregiving practices, and the child's characteristics, may also influence children's mental health and well-being.

Regardless of parental migration status, this study also shows a gender gap, with boys expressing more rule-breaking behaviour and girls showing worse outcomes in all YSR syndrome scales, especially in broadband internalizing, a finding which is supported by previous research (Campbell et al. 2021; Cavallo et al. 2006; Kaye-Tzadok et al. 2017). For example, Campbell and colleagues examined this issue across 73 countries and found worse internalizing outcomes in adolescent girls (Campbell et al. 2021). Surprisingly, the richest nations in Europe with the highest indices of gender equality display the most notable gender differences (Campbell et al. 2021). Studies highlight that teenage girls from low to high-income countries report higher levels of anxiety and depression and evaluate their health as poor (Schraml et al. 2011; West and Sweeting 2003; Wiklund et al. 2012). Though there is little increase in psychological distress among boys, research, including panel data, shows a significant increase among girls (Duijnhof et al. 2015). A group of scientists explain this gender disparity with biological differences (hormonal changes during adolescence) (Lien et al. 2006), reporting differences (boys tend to underreport) (Hagquist 2010), or increased educational pressure that girls perceive as more stressful (Wiklund et al. 2012). Unlike internalizing problems, externalizing outcomes seem more inconsistent across countries, yet predominantly studies suggest worse externalizing outcomes among boys (Leadbeater et al. 1999; Rescorla et al. 2007; Wiklund et al. 2012). Similar externalizing problems in both genders and more rule-breaking behaviour in boys in this study only partially reflect the existing research.

This study identified relationships with family members, especially parents and siblings, friendships, and school environment as factors associated with Georgian schoolchildren's mental health. Existing research on child mental health echoes this finding (Kapi et al. 2007; Lesinskiene et al. 2018). For example, Kapi and colleagues found that Greek children who dislike their living environment and have relationship difficulties with family members and friends perceive themselves as unhappy (Kapi et al. 2007). Contrarily, warm relationships with family members are associated with well-being and happiness (Bagwell and Coie 2004). Developing good relationships with peers and having friends also seems beneficial for boys who express aggressive behaviour (Bagwell and Coie 2004). Making new connections could benefit children, particularly boys involved in this study, as they exhibit more rule-breaking behaviour.

Alongside family and friends, this study identified the school environment as a contributor to Georgian schoolchildren's well-being; evidence from other countries supports this finding (Hjern et al. 2008; Salmela-Aro and Tynkkynen 2012; Wiklund et al. 2012). Conflict with peers and teachers, high academic demands, and bullying could lead children, particularly girls, to anxiety, isolation, and even depression (Hjern et al. 2008). On the contrary, children in supportive school environments perceive themselves as resilient, happy and satisfied with life (Bradshaw et al. 2013). Similar to girls from other nations, worse mental health and especially internalizing outcomes among girls in this study could be attributed to the school environment.

#### **4.4. Left-behind children's experience, coping with migratory separation and resilience**

This study examined the parental migration experience among left-behind schoolchildren from Georgia, their coping strategies, and perceived resilience. The study also explored non-left-behind children's coping capabilities with stressful life events, resilience, and perceptions about their left-behind classmates. The findings suggest that children need time to develop resilience and coping mechanisms. In left-behind children's perception, friendships, school support, social contacts, close family ties, positive attitudes, and self-care help to become resilient and cope with migratory separation.

The study's findings are consistent with the resilience theory (Wang et al. 2015a). Following the theory, this research conceptualises adolescents' perceived positive attitudes and self-encouragement, taking responsibility for their well-being, as compensatory and protective models (Wang et al. 2015a). Peers are the primary resources for promoting resilience while receiving support and having positive relationships with family members also play an important role. Although children of migrant parents are thought to be at-risk for mental health disorders because of parental separation, this research demonstrates that individuals who use their resources and assets over time develop healthy coping mechanisms and become resilient.

In line with this study's findings, previous research on children's coping and resilience suggests that individual child characteristics, such as optimism, play a crucial role in resilience (Tusaie et

al. 2007). Some scientists also describe optimism as a cognitive factor that can minimize the adverse effect of stressful life events while maximizing resilience (Tusaie et al. 2007; Tusaie and Patterson 2006). Even *at-risk* adolescents with high perceived resilience levels show reduced anxiety, depression, and risky behaviour (Tusaie et al. 2007; Wu et al. 2017). Resilience also moderates the adverse effects of loneliness in children who are separated from their migrant parents in China (Ai and Hu 2016). Moreover, some scholars claim resilience is essential for child development (Brooks and Goldstein 2002). Enhancing optimism prepares young people for future challenges. Optimism and hopefulness may also explain Georgian left-behind adolescents' coping and resilience.

Similar to left-behind adolescents in this study, research from China suggests that close family ties and warm relationships with migrant parents enhance children's coping and resilience (Ai and Hu 2016; Dong et al. 2019; Wu et al. 2017; Xiao et al. 2019). For example, a study by Xiao and colleagues investigated potential contributors to psychological resilience in children and found that children of migrants are less resilient than children of non-migrants; however, family support and good relationships with parents strengthen their resilience (Xiao et al. 2019). Especially parenting practices seem to play a role in child mental health (Scott 2012). Some scholars from China also suggest that mothers can provide successful parenting from a distance and even strengthen relationships between caregivers and left-behind children, which researchers consider another crucial contributor to child resilience (Xu et al. 2014). Available studies describe a family as a place where children socialise the most; thus, family plays a significant role in children's emotional regulation (Ai and Hu 2016; Brody et al. 2001).

Congruent with this study's results, regardless of parental migration experience, friendships were found to be among the greatest predictors of resilience for children living in the UK (Van Harmelen et al. 2017) and in China (Xiao et al. 2019). In their study, Van and colleagues compared the role of close friendships in developing resilience and found a stronger association with immediate as well as long-term resilience in adolescents (Van Harmelen et al. 2017). Adolescents tend to get more influenced by peer environments than younger children (Crone and Dahl 2012), and supportive friends are crucial for better resilient functioning. Studies also show that negative peer influence is associated with increased loneliness, delayed cognitive development, and worsened

mental health outcomes in children (Crone and Dahl 2012; Vanhalst et al. 2015). Theories explaining why friendships play such an essential role in resilience include (i) the sense of togetherness (Cohen and Wills 1985), (ii) improved decision-making skills (Jehn and Shah 1997), (iii) improved interpersonal skills (Buhrmester 1990), (iv) enhanced positive experiences through interactions, and (v) reduced aggressive behaviours (Crone and Dahl 2012). This study highlights that children of migrants especially benefit from friendships with their peers who have the same migratory separation experience.

Some left-behind children in this study perceive school as a place of social support. Similarly, previous research has shown that solid networks and school support are associated with low loneliness among Chinese children of migrant parents (Ai and Hu 2016; Li et al. 2018). Scholars refer to school, family and community as social capital, essential for building resilience among left-behind children (Li et al. 2018). Research describes a school as supportive if the relationships between teachers and students, as well as among classmates, are friendly, open, and caring (Johnson 2008; Sosa and Gomez 2012). For example, a study by Sosa and Gomez explored schoolteachers' perceptions of Latino students' resilience; the authors found that teachers can enhance children's coping and resilience by building warm relationships with their students, by showing them empathy and allowing them to express their feelings (Sosa and Gomez 2012). Empathy seems to play a significant role in school adjustment among children in China whose parents are migrant workers (Qin et al. 2022). Existing research also underscores schools' potential to enhance resilience for all children by supporting them with academic challenges, developing good relationships with parents and helping them develop social skills (Brooks 2006). The positive impact of schools in enhancing child resilience is widely discussed in the literature; however, the potential risks of a less supportive school environment should also be acknowledged.

#### **4.5. Discussion of integrated results**

The Quantitative and qualitative findings of this study converge in some respects while diverging in others. For example, a systematic literature review of international studies and a qualitative study with schoolteachers in Georgia showed that left-behind girls are more vulnerable than boys. In line with this finding, a quantitative school survey shows greater emotional and behavioural difficulties, namely higher YSR scores (empirically based syndromes and broadband internalizing

problems), which indicates that regardless of parents' migration status, girls in Georgia and beyond are worse off than boys. The reason for this gender difference could be that girls and boys express their emotions differently, which may reflect how they rate their health. For example, Leadbeater and colleagues suggest that adolescent boys are generally afraid to be criticized and tend to underreport their emotional and behavioural problems, while girls do not have this concern (Leadbeater et al. 1999). Left-behind girls being more open about their feeling of migratory separation may also explain why teachers perceive them as more vulnerable than boys.

The findings only partially align regarding left-behind children's perceived mental health and well-being. Schoolteachers describe migratory separation from parents as a purely negative life experience, resulting in poorer mental health, nutrition, and academic performance. However, while children describe separation from their parents as stressful, they also acknowledge positive aspects, such as maintaining close ties with migrant parents, strengthening relationships with the remaining parent, material benefits and motivations to study well and make their parents proud of their academic achievements. This inconsistency demonstrates that perceptions and experiences of schoolteachers and children differ; it shows the importance of exploring this issue from multiple perspectives. This study also identifies the need for further studies, including more objective measures/tools to assess children's mental health.

#### **4.6. Strengths and limitations**

##### **Impact of international migration on mental health and well-being of left-behind children**

This study is the first to examine international labour migration in the context of left-behind children's mental health and well-being in a systematic literature review. Most research on this topic originates from China, where migration is internal (rural-urban) (Fellmeth et al. 2018; Wang et al. 2015b; Wen and Lin 2012; Wu et al. 2019; Zhou et al. 2015). Internal migration and its effects on children differ from international migration. For example, children of overseas migrant workers are separated from their parents for longer periods of time. By addressing children of international migrants, this study provides a clearer picture and insights into the mental health effects of such migratory separation. In this study, selected articles were grouped and analysed

based on their geographical locations; thus, providing country- and culture-specific insights, while identifying gaps in research from specific regions. For example, only a few studies originate from South-East Asia or Eastern Europe and some regions or countries are missing altogether. This study additionally analysed gender and age aspects. Although individual studies frequently identified culture, gender, and migration duration as the factors associated with mental health outcomes among left-behind children, this study is the first to synthesize these results.

This study had several limitations. The articles included in the review applied multiple designs, sampling techniques and sample sizes, outcome measures, and statistical analyses, making it challenging to compare and synthesize the results or to perform meta-analyses. They also varied in quality, with some showing moderate to high risks of bias. Some authors should have reported details such as response rate or loss-to-follow-up (in the case of longitudinal studies), but did not. As described in the methods section, broad search terms were used to identify all relevant studies. The term *left-behind* is most used in this context internationally. However, other terms might also be used in some countries to refer to children of migrant parents, resulting in some relevant articles having been missed. All studies included in this review were published in English; some relevant studies might be published in local languages. Findings from the studies included show only associations and, therefore, one cannot conclude that parental migration causes specific mental health outcomes in left-behind children.

### **Schoolteachers' perceptions of labour migration and left-behind children**

This study is the first to explore schoolteachers' perspectives and perceptions about left-behind children and transnational families in Georgia. By addressing the substantial research gap in Eastern Europe, this study added new viewpoints about how children of migrants are viewed in Georgia. Another strength of this study is including teachers from rural and urban schools, which enabled comparing teachers' perceptions of left-behind children from both areas. The study also included multiple methods, such as focus group discussions and in-depth interviews, enabling more in-depth analysis and data triangulation. Systematic debriefing (McMahon and Winch 2018) after each interview enhanced the data quality, while reflexive analysis (Braun and Clarke 2019; Clarke et al. 2015) guided systematic coding and deeper-level analysis. Overall, the study was

conducted and reported according to the Consolidated Criteria for Reporting Qualitative Studies (COREQ) guidelines, which ensured thorough and transparent reporting (Tong et al. 2007).

This study has some limitations. All findings of this research reflect the perspectives and opinions of school principals and teachers from two regions in Georgia, and the results are more thematically than geographically generalizable. The views and perspectives of study participants cannot be interpreted objectively. Even though school plays a crucial role in the lives of left-behind children and their transnational families, involving children, their migrant parents or caregivers would enable a better understanding of how parental migration in Georgia impacts children.

### **Left-behind children's self-reported emotional and behavioural problems**

Several components of this study add new perspectives to prior research. First, this study addresses a significant research gap in Eastern Europe by examining children's emotional and behavioural problems in Georgia. Second, this study includes children's self-reported health measures, while all existing studies on left-behind children's health in Georgia used adult reports (Cebotari et al. 2018b; Gassmann et al. 2018; Vanore 2016). Third, the study extends its focus to all children regardless of their parental migration status and provides a comparative analysis of problem behaviours between adolescent girls and boys, left-behind and non-left-behind adolescents. It also considers other individual and demographic characteristics. The study is the first to employ Achenbach's Youth Self Report (YSR) in Georgia to measure adolescent emotional and behavioural difficulties. The YSR is one of the most reliable and valid tools widely used globally (Achenbach 1994; Rescorla et al. 2007; Sandoval et al. 2006). Until now, YSR has only been used in clinical practice in Georgia. This study enables the equal representation of schoolchildren from different socio-economic backgrounds by including schools from rural and urban areas. Finally, this study initiates school-based research on children's mental health in general, thus, raising public awareness of this issue.

The study had some limitations. Data was primarily collected during the COVID-19 pandemic when Georgia's government permitted the reopening of schools after three semesters of closure. The country's Ministry of Education allowed schools to select between in-person and virtual classes; some schools remained online. Therefore, a random sample selection was not feasible.

Furthermore, other pandemic-related life changes, including online schooling, could have also impacted the findings. Since all children in this study lived in the Samegrelo-Zemo Svaneti region, the findings are not nationally representative. The overall participation rate in this study is relatively lower than anticipated. Children could have missed school for various reasons, and their responses could have differed from those who attended school. Missing observations are another limitation of this study. The YSR questionnaire consisted of more than 100 items, and some students skipped certain items or sometimes even an entire page (observations were excluded from the analysis if any YSR problem item was missing). Overall, all conclusions of this study reflect children's self-evaluated health outcomes. Involving parents, caregivers, or schoolteachers could allow comparison of outcomes across a wide range of participants, which could render the findings more insightful. Finally, the study's cross-sectional design prevents drawing any firm conclusions about the reasons for the emotional and behavioural difficulties children experience in Georgia.

### **Left-behind children's experience, coping with migratory separation and resilience**

Children are primarily excluded from qualitative research despite being indispensable informants of their health and well-being. This study is novel in addressing this research gap by qualitatively exploring children's perceptions of parental migration, their well-being, coping capabilities, and resilience. Comparing perceptions between children of migrant and non-migrant parents also allows data triangulation.

This research also has several methodological strengths. First, the study used/tested a unique interviewing approach by conducting narrative life interviews with children/adolescents; this interviewing style leads to comprehensive data; however, its use is scarce in research, particularly in children. This interviewing style can be applied to other qualitative studies with children beyond this study's context. Second, the daily debriefing (McMahon and Winch 2018) after the interviews enabled identifying central issues and better planning for the following interviews. Third, reflective thematic analysis (Braun and Clarke 2019; Clarke et al. 2015) was central for narrative interviews that included broad topics from children's kindergarten experiences to their coping and resilience.

This study has some limitations. All interviewed children are from one public school; therefore, the findings are more thematically than geographically applicable. All findings and conclusions from this study reflect the experiences and opinions of left-behind children and their classmates. Involving parents/caregivers and exploring their perspectives would also make the study findings more insightful. Furthermore, all interviews were conducted during the COVID-19 pandemic in a public school that opened after three semesters of online schooling. Overall, COVID-19-related life changes, including home-schooling and stress, may have influenced children's experiences, coping capabilities, and resilience.

### **Mixed methods study design – strength and limitations**

This study is the first to apply a mixed methods design in addressing left-behind children's health in Georgia, one of the leading migrant-sending countries in Eastern Europe and a vastly underrepresented region in existing research. The research is comprehensive in that it employs qualitative and quantitative methods, thus providing a more complete and nuanced understanding of the issue. The study's first phase, a systematic literature review about parental migration effects on left-behind children's mental health, was central to contextualizing the primary research in Georgia. The qualitative components involved schoolteachers, principals, and children of migrant and non-migrant parents, thus enabling in-depth exploration of left-behind children's health and well-being from multiple perspectives. The school survey using YSR provided a quantifiable measure of emotional and behavioural difficulties among adolescents in Georgia. This mixed methods study included children of non-migrating parents (non-left-behind children) as a comparison group in both quantitative and qualitative components. Involving non-left-behind children in the schools' survey enabled a comparative analysis of emotional and behavioural problems while interviewing children of non-migrants led to a better understanding of how children of migrants are perceived by their peers; it also enabled comparison of emotional regulations, resilience and coping with stressful life events among both groups.

Overall, this mixed methods study makes a valuable contribution to the existing international literature on left-behind children and their transnational families, which still needs to be improved, particularly in the context of Georgia and Eastern Europe.

This study also has some limitations. Even though it investigated parental migration effects on left-behind children from the perspective of schoolteachers/principals and children, using multiple approaches (e.g., survey questionnaire, focus group discussions, in-depth and narrative interviews), it did not include perspectives of migrant parents, caregivers or decision makers (Key informants from the policy). This study was designed as a convergent-parallel mixed methods research; however, due to the COVID-19 pandemic lockdown and school closures, its quantitative and qualitative components (school survey and interviews with children) were delayed for three study semesters. The COVID-19 pandemic school closures also affected sample selection; it was not feasible to include multiple regions, randomize schools, or conduct qualitative interviews in several schools. All students and the interviewer had to wear medical masks, which made it challenging to observe participants' non-verbal communication (including body language and facial expressions) during the qualitative interviews. Finally, even though children recalled their migratory separation experiences, the study could not measure the long-term effects of parental migration on children, which is an area for future research.

#### **4.7. Implications for research and policy**

This study has research and policy implications for left-behind children and their transnational families in Georgia and beyond.

Left-behind children in Georgia need emotional and academic support. Although schoolteachers claim to make significant efforts to help schoolchildren from transnational families, they also acknowledge being unable to fully meet their health, well-being, or education needs. Support becomes even more challenging when communication between schools and parents/caregivers is disrupted. No health or social protection policies are available in Georgia to protect/support children and their transnational families. This study reveals the need for collaborative work between policymakers and organizations responsible for children and societal well-being to better equip schools in their actions towards supporting left-behind children; this could be achieved by providing psychological counselling in schools, as well as training teachers on how to prevent children from developing emotional and behavioural difficulties, monitor and detect early symptoms of psychological distress, particularly when stressful life events, such as parental migration occur.

Left-behind and non-left-behind adolescents in Georgia have unmet health needs, such as emotional and behavioural difficulties in both genders, worse internalizing outcomes in girls and rule-breaking behaviour in boys. Despite the rapid increase in mental health disorders among children and youth in Georgia, there is no evidence to show that appropriate action has been taken to address this issue. Considering that more than half of all mental disorders develop during childhood (Kessler et al. 2007), the government and non-governmental organizations should take urgent actions towards preventing, detecting, and improving young people's mental health in Georgia. Children cannot reach their full potential and harmonious development without good health and well-being. Psychological distress and emotional difficulties during childhood may have detrimental long-term effects and even lead to psychopathologies in adulthood. This study suggests that closeness with family members, friendships and a supportive school environment are associated with better mental health outcomes for adolescents, regardless of their parent's migration status. Children, parents, and caregivers need interventions, such as skill-building

seminars, to develop warm relationships that protect adolescents from experiencing emotional and behavioural difficulties in Georgia and beyond.

The relatively low participation in the quantitative school survey has several implications. Since the data was collected during the COVID-19 pandemic, many students were absent due to public fear of getting infected. This study also found that submitting informed consent forms to engage in a research project is unusual and may be viewed as “intrusive” in Georgia; particularly parents/caregivers from labour migrant households, who do not necessarily inform schools about their migration, might find signing official documents “risky”. Another reason could be that despite the YSR questionnaire's anonymity, some children and their families may still find the topic too sensitive. This research is the first step in engaging young people, their families, schools, and communities in future research efforts.

Overall, this study highlights that it is crucial to raise awareness about (i) potential health concerns and other dangers associated with the migratory separation of left-behind children; (ii) mental health needs of children in Georgia and the potential risks of not addressing these needs; (iii) potential benefits of developing close family ties and friendships for child well-being and (iv) potential benefits of participating in research projects and intervention programs that address children’s mental health needs.

Based on the left-behind schoolchildren’s perspectives on their migratory separation experience, coping and resilience, this study recommends/encourages the following: (i) migrant parents to strengthen ties with children by using online communication and home visits (as frequently as possible); (ii) caregivers and other family members to create an open and supportive environment that allows children (especially 6-10 years old) to express their feelings; (ii) adolescents to support their peers whose parents migrated; (iv) school personnel to create a supportive, secure, and friendly environment for children; (v) policymakers to develop interventions for left-behind children, their families, and communities; and, (vi) collaborative work for developing child resilience-strengthening programs.

This study underscores the need for further research on left-behind children in Eastern Europe and other migrant-sending regions. Existing research is primarily cross-sectional and unable to

determine the long-term impacts of migratory separation on children or provide an in-depth understanding of this complex issue. Future research using follow-up data as well as qualitative and mixed methods approaches are necessary to address this gap. Most migration and health research focus on migrants only and exclude non-migrants who are affected by human mobility. Therefore, scientists from this field are strongly encouraged to extend their research to left-behind family members of migrant workers, such as children. In addition, public health, and child mental health scientists, especially from migrant-sending countries, are encouraged to investigate left-behind children's mental health and well-being from various perspectives in order to generate new evidence about how children are affected by their parents' migration, what are their needs and how best to support them.

Finally, to reduce child-parent separations, policymakers in migrant-sending countries should devote more resources and efforts into providing employment opportunities within their countries.

## 5. SUMMARY

Global migration is on the rise, and as a result, millions of children are left in their home countries while their parents migrate abroad. Migrant workers are motivated to create better living conditions for their families; however, separation from parents may lead children to vulnerability and poor health. Little is known about the health impact of parental migration on left-behind children in Eastern Europe. The study focuses on addressing this research gap in Georgia, a leading labour-migrant-sending country in the region.

This mixed methods research started with a systematic literature review (i) examining the impact of international labour migration on the mental health and well-being of left-behind children. Results of the review informed a qualitative study with schoolteachers (ii) from six rural and urban public schools in two out-migration regions exploring their perspectives on parental migration and left-behind children in Georgia using focus group discussions and in-depth interviews; the results of the study informed a school survey with adolescents (iii) from 18 public schools as well as a qualitative study with left-behind and non-left-behind adolescents (iv) from a public school in the Samegrelo-Zemo Svaneti region.

The school survey (iii) assessed adolescents' emotional and behavioural difficulties. The responses of 933 participants (ages 12–18) were analysed using empirical syndrome scales and broadband scales: internalizing and externalizing derived from the Achenbach's Youth Self-Reported questionnaire. The qualitative interviews with adolescents (iv) followed the school survey. Adolescents of migrants and their classmates were interviewed using a narrative interviewing style to explore their experiences and feelings about their parent(s)' migration, children's perceived health and well-being, and their coping and resilience. This mixed methods thesis integrated qualitative and quantitative findings and critically discussed convergences and divergences across the studies.

Results of the systematic literature review showed an adverse effect of parental absence on children's health in the Americas and South Asia. In contrast, effects varied from negative to non-differing or even positive in other migrant-sending regions. Despite millions of children living in

transnational households, the research on the impact of migratory separation on children is still primarily limited to internal rural-urban migration in China.

This research found that parental migration effects on children are complex in Georgia. Schoolteachers perceive migratory separation as a traumatizing life event, making children vulnerable to physical and mental health issues, including unhealthy eating habits, anxiety, stress, depression, loneliness, and worsened academic performance. Moreover, schoolteachers view themselves as primary advocates for left-behind children and their families; however, they also acknowledge communication challenges with migrant parents/caregivers and highlight the need for external support, such as psychological counselling services in schools. Similarly, schoolchildren perceive separation from parents as a stressful life event; however, in the qualitative study, they also acknowledge positive aspects of migrant labour, such as material benefits and independence. From the perception of left-behind children, close family ties, friendships, school support, optimism and self-care help with becoming resilient and coping with migratory separation. Results from this mixed methods research also emphasize that children and schoolteachers perceive the impact of parental absence on children differently, thus identifying the need to explore this issue from multiple perspectives.

Regardless of their parents' migration status, adolescents scored higher on emotional and behavioural problems compared to Achenbach's Normative Sample. The study also revealed a gender gap, with boys exhibiting more rule-breaking behaviour and girls performing worse on most Youth Self-Reported syndrome scales. Multiple regression analysis showed associations between adolescents' problem behaviours and relationships with family members, friendships, as well as school environment.

To conclude, this research highlights the need for collaborative work among policymakers and organizations responsible for children and societal well-being to better equip schools in their actions towards supporting left-behind children, specifically, providing psychological counselling in schools and coaching teachers on how to prevent children from developing emotional and behavioural difficulties, particularly when stressful life events, such as parental migration, occur. This research also considers it crucial to raise public awareness about the benefits of close family ties in fostering children's well-being.

## ZUSAMMENFASSUNG

Die globale Migration nimmt zu und infolgedessen bleiben Millionen von Kindern in ihren Heimatländern zurück, während ihre Eltern ins Ausland abwandern. Arbeitsmigranten sind motiviert, bessere Lebensbedingungen für ihre Familien zu schaffen. Die Trennung von ihren Eltern kann jedoch dazu führen, dass Kinder vulnerabel sind und einen schlechteren Gesundheitszustand aufweisen. Über die gesundheitlichen Auswirkungen der elterlichen Migration auf die zurückbleibenden Kinder in Osteuropa ist wenig bekannt. Die vorliegende Studie befasst sich mit dem Thema in Georgien, einem der Hauptländer in der Region, das Arbeitsmigranten entsendet.

Im Rahmen einer *Mixed-Methods*-Studie wurde zunächst eine systematische Literaturübersicht (i) zu den Auswirkungen von Arbeitsmigration auf die psychische Gesundheit und das Wohlbefinden zurückbleibender Kinder durchgeführt. Die Ergebnisse dienten als Grundlage für eine qualitative Studie mit Lehrkräften (ii) aus sechs öffentlichen Schulen, die sich in ländlichen und städtischen Regionen mit hohen Abwanderungszahlen befanden. Mittels Fokusgruppendifkussion und Tiefeninterview wurde die Perspektive der Lehrer auf die elterliche Migration und die zurückbleibenden Kinder untersucht. Die Resultate flossen in den Studienteil mit Schülern ein, der sowohl eine Umfrage mit Fragebögen (iii) an achtzehn Schulen, als auch Interviews (iv) an einer Schule umfasste.

In der Umfrage (iii) wurden emotionale und verhaltensbezogene Schwierigkeiten der Jugendlichen untersucht. Die Antworten von 933 Teilnehmenden im Alter von 12-18 Jahren wurden anhand von empirischen Syndrom-Skalen und den Breitband-Skalen *Internalisierung* und *Externalisierung*, die aus dem Achenbach-Fragebogen zur Selbsteinschätzung von Jugendlichen abgeleitet wurden, analysiert. Interviews mit Kindern von Arbeitsmigranten und deren Klassenkameraden (iv) wurden mittels eines narrativen Interviewstils zu ihren Erfahrungen und Gefühlen in Bezug auf ihre Eltern, auf ihre Gesundheit und ihr Wohlbefinden, sowie ihre Bewältigungs- und Widerstandsfähigkeit befragt. Schließlich wurden die qualitativen und quantitativen Ergebnisse zusammengeführt und Konvergenzen und Divergenzen kritisch diskutiert.

Die Ergebnisse der systematischen Literaturübersicht zeigten, dass sich die Abwesenheit der Eltern in Nord- und Südamerika sowie in Südasiem negativ auf die Gesundheit von Kindern auswirkt. Im Gegensatz dazu zeigten sich in anderen Regionen negative und positive

Auswirkungen. Obwohl weltweit Millionen von Kindern in transnationalen Familien leben, bezieht sich ein Großteil der Forschung auf Land-Stadt-Migration innerhalb Chinas.

Die Untersuchungen in Georgien zeigten ein komplexes Bild der Auswirkungen von elterlicher Migration auf zurückbleibende Kinder. Lehrer beschrieben es als traumatisierendes Ereignis, das Kinder für körperliche und psychische Gesundheitsprobleme anfällig mache. Dazu gehörten ungesunde Essgewohnheiten, Angstzustände, Stress, Depressionen, Einsamkeit und eine Verschlechterung der schulischen Leistungen. Lehrkräfte sahen sich selbst als primäre Fürsprecher von zurückbleibenden Kindern und ihren Familien, räumten jedoch ein, dass die Kommunikation mit Eltern und Betreuungspersonen schwierig sei und externe Unterstützung beispielsweise durch psychologische Beratung benötigt werde. Ähnlich beschrieben die Kinder die Trennung von ihren Eltern als belastend, wobei sie aber auch die positiven Aspekte wie zum Beispiel materielle Vorteile und Unabhängigkeit klar benannten. Enge Familienbeziehungen, Freundschaften, schulische Unterstützung, Optimismus und Selbstfürsorge zeigten sich als wichtig zur Stärkung der zurückgelassenen Kinder. Die Ergebnisse der *Mixed-Methods*-Forschung verdeutlichten, dass Kinder und Lehrkräfte die Auswirkungen elterlicher Migration unterschiedlich wahrnehmen. Zur Erforschung des Themas sind diese verschiedenen Perspektiven besonders wichtig.

Unabhängig vom Migrationsstatus wiesen die Jugendlichen im Vergleich zur Achenbachs-Normativstichprobe höhere Werte für emotionale und Verhaltensprobleme auf. Es zeigten sich geschlechtsspezifische Unterschiede, wobei Jungen bei regelwidrigem Verhalten und Mädchen bei den meisten selbstberichteten Jugendsyndrom Skalen schlechter abschnitten. Eine multiple Regressionsanalyse zeigte Zusammenhänge zwischen dem Problemverhalten der Jugendlichen und den Beziehungen zu Familienmitgliedern, Freunden und dem schulischen Umfeld.

Politische Entscheidungsträger und Organisationen für das Wohlergehen von Kindern sollten zusammenarbeiten um Schulen im Umgang mit zurückbleibenden Kindern besser zu unterstützen. Psychologische Beratungen an Schulen könnten beispielsweise dazu beitragen Schwierigkeiten frühzeitig zu erkennen und zu verhindern, insbesondere bei belastenden Ereignissen, wie die Arbeitsmigration der Eltern. Eine Sensibilisierung für die Vorteile von engen Familienbanden und Freundschaften für das Wohlbefinden der Kinder ist von entscheidender Bedeutung.

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## LIST OF PUBLICATIONS

### Peer-reviewed publications related to this thesis (first authorship)

1. Antia, K., Račaitė, J., Šurkienė, G. and Winkler, V. (2023). **The gender gap in adolescents' emotional and behavioural problems in Georgia: a cross-sectional study using Achenbach's Youth Self Report**. *Child Adolesc Psychiatry Ment Health* 17 (1), 44, doi: 10.1186/s13034-023-00592-0.
2. Antia, K., Rodoreda, A. B. and Winkler, V. (2022). **Parental migration and left-behind children in Georgia - school teachers' experience and perception: a qualitative study**. *BMC Public Health* 22 (1), 2077, doi: 10.1186/s12889-022-14516-8.
3. Antia, K., Boucsein, J., Deckert, A., Dambach, P., Račaitė, J., Šurkienė, G., Jaenisch, T., Horstick, O. and Winkler, V. (2020). **Effects of International Labour Migration on the Mental Health and Well-Being of Left-Behind Children: A Systematic Literature Review**. *Int J Environ Res Public Health* 17 (12), doi: 10.3390/ijerph17124335.
4. Antia K, Winkler V, Scott K, McMahon AS, Rodoreda AB. **“If parents sacrifice their life because of us, we also must make some sacrifices”;** coping among left-behind adolescents in Georgia after parental out-migration. *Child Adolesc Psychiatry Ment Health* (to be submitted)

**Publication 1** Corresponds study objective (i) examining the impact of international parental migration on the mental health and well-being of left-behind children through a systematic literature review. Methods (2.2) and results (3.1) sections of the dissertation are based on this publication. The respective discussion sub-chapters (4.1; 4.6) also discuss the results and study strengths/limitations. My contribution to this publication consisted of conceptualising the study, literature search, data extraction, study quality/risk of bias assessment, formal analysis, data visualisation and writing the original draft.

**Publication 2** Corresponds study objective (ii) exploring schoolteachers' perceptions and perspectives on parental migration and left-behind children in Georgia with qualitative interviews-a qualitative study. Methods (2.3) and results (3.2) sections of the dissertation are based on this publication. The respective discussion sub-chapters (4.2; 4.6) also discuss the results and study

strengths/limitations. My contribution to this publication consisted of conceptualising, methodology, ethical approval, collecting data, transcribing and translating interviews, coding transcripts, identifying initial themes/sub-themes, and writing the original draft.

**Publication 3** Corresponds study objective (iii) assessing parental labour migration effects on children's mental well-being – a school survey with adolescents. Methods (2.4) and results (3.3) sections of the dissertation are based on this publication. The respective discussion sub-chapters (4.3; 4.6) also discuss the results and study strengths/limitations. My contribution to this publication consisted of conceptualising, data collection, ethical approval, electronic data entry, data analysis, data visualisation and writing the original draft.

#### **Other peer-reviewed publications related to this thesis (co-authorship)**

1. Račaitė, J., Lindert, J., **Antia, K.**, Winkler, V., Sketerskienė, R., Jakubauskienė, M., Wulkau, L. and Šurkienė, G. (2021). **Parent Emigration, Physical Health and Related Risk and Preventive Factors of Children Left Behind: A Systematic Review of Literature.** *Int J Environ Res Public Health* 18 (3), doi: 10.3390/ijerph18031167.

**Publication 1** of Račaitė and colleagues was conducted to examine the physical health effects of parental migration on left-behind children with a systematic literature review. The results of this publication are cited in the introduction sub-chapter 1.2.3 of the dissertation. My contribution to this publication consisted in identifying resources, reviewing/editing the original draft and data visualisation.

### **Other peer-reviewed publications (co-authorship)**

- Abderbwih, E., Mahanani, M. R., Deckert, A., **Antia, K.**, Agbaria, N., Dambach, P., Kohler, S., Horstick, O., Winkler, V. and Wendt, A. S. (2022). **The Impact of School-Based Nutrition Interventions on Parents and Other Family Members: A Systematic Literature Review**. *Nutrients* 14 (12), doi: 10.3390/nu14122399.
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## Conference abstracts

- Antia, K., Boucsein, J., Deckert, A., Dambach, P., Racaite, J., Surkiene, G., ... & Winkler, V. (2020). **Impacts of international labor migration on the mental health and well-being of left-behind children.** European Journal of Public Health, 30(Supplement\_5), ckaa165-691 Oral Presentation. 16th World Congress on Public Health 2020 - Public health for the future of humanity: analysis, advocacy and action Virtual event.
- Antia, K., Berner-Rodoreda, A. and Winkler, V., 2021. **School teachers' perception on parental migration and left-behind children in rural Georgia.** European Journal of Public Health, 31(Supplement\_3), pp.ckab164-866. Oral presentation. 14th European Public Health Conference -Public health futures in a changing world. Virtual event.
- Antia, K., Berner-Rodoreda, A and Winkler, V(2022). **How do left-behind children cope with parental migration in Georgia. A qualitative study.** 25th World Congress - Child and Adolescent Mental Health: Shaping the Future. Dubai, 2022
- Antia, K., Berner-Rodoreda, A. and Winkler, V., 2022. **Facing COVID-19 in Georgia-left behind children coping better with COVID-19 precautions.** European Journal of Public Health, 32(Supplement\_3), pp.ckac131-066. Poster presentation. 15<sup>th</sup> European Public Health Conference, Berlin 2022.
- Racaite, J., **Antia, K.**, Winkler, V., Dambrauskaite, E., Tracevskyte, I., Lesinskiene, S. and Surkiene, G., 2022. **Self-reported physical and emotional health among left behind children in Lithuania. A pilot study.** European Journal of Public Health, 32(Supplement\_3), pp.ckac131-433. Poster presentation. 15<sup>th</sup> European Public Health Conference, Berlin 2022.
- Sappiyabhanphot, J., Aye, T.T., Shreedhar, P., Wasko, Z., **Antia, K.** and Winkler, V., 2022. **Health interventions for migrants and refugees in host Southeast Asian countries: a systematic review.** European Journal of Public Health, 32(Supplement\_3), pp.ckac131-510. Poster presentation. 15<sup>th</sup> European Public Health Conference, Berlin 2022.

## APPENDICES

### A1. School survey: Additional questionnaire. Source: (Antia et al. 2023)

1. **How many brothers and how many sisters do you have?**

- Brothers (add number) \_\_\_\_\_
- Sisters (add number) \_\_\_\_\_
- No brothers and no sisters

2. **Whom do you live with? (Cross all that is true for you)**

- Mother
- Father
- Grandmother
- Grandfather
- Relatives
- Other (specify) \_\_\_\_\_

3. **Which of the following statement describes your situation best?**

- My mother was abroad but returned during the Covid-19 pandemic
- My father was abroad but returned during the Covid-19 pandemic
- Both of my parents were abroad, and both returned during the Covid-19 pandemic
- None of my parents were abroad
- One (or both) of my parents remains abroad

**Continue only if a parent (one or both) is currently abroad.**

4. **How long has your parent(s) been living abroad?**

**Mother**

- Less than a year
- More than a year

**Father**

- Less than a year
- More than a year

5. **How often does your parent(s) visit home?**

- Once in several months
- Once a year
- Once in several years

6. **How often do you communicate with your parents over a distance (Skype, Messenger, Viber, or other programs)?**

- Daily
- Weekly
- Monthly
- Less than a month

## A2: School survey: Additional questionnaire (Georgian Version)

1. რამდენი და-მმა გყავს?  
 ძმა (მიუთითეთ რაოდენობა) \_\_\_\_\_  
 და (მიუთითეთ რაოდენობა) \_\_\_\_\_  
 არ მყავს და-მმა
2. ვისთან ერთად ცხოვრობ? (შემოხაზე ყველა პასუხი რომელიც აღწერს შენს მდგომარეობას)  
 დედა  
 მამა  
 ბებია  
 ბაბუა  
 ნათესავები  
 სხვა (მიუთითეთ)\_\_\_\_\_
3. ჩამოთვლილი პასუხებიდან რომელი აღწერს შენს მდგომარეობას?  
 დედა იყო საზღვარგარეთ თუმცა დაბრუნდა COVID-19 პანდემიის დაწყების შემდეგ  
 მამა იყო საზღვარგარეთ თუმცა დაბრუნდა COVID-19 პანდემიის დაწყების შემდეგ  
 ორივე მშობელი იყო საზღვარგარეთ, თუმცა ორივე დაბრუნდა COVID-19 პანდემიის დაწყების შემდეგ  
 არც ერთი მშობელი არ იყო საზღვარგარეთ  
 ერთი ან ორივე მშობელი ამჟამად საზღვარგარეთ იმყოფება

განაგრძე კითხვებზე პასუხის გაცემა მხოლოდ იმ შემთხვევაში თუკი შენი რომელიმე მშობელი ამჟამადაც საზღვარგარეთ იმყოფება

1. რამდენი ხანია რაც შენი მშობელი საზღვარგარეთ იმყოფება?  
**დედა**  
 ერთ წელზე ნაკლები  
 ერთ წელზე მეტი  
**მამა**  
 ერთ წელზე ნაკლები  
 ერთ წელზე მეტი
2. რამდენად ხშირად ჩამოდის მშობელი (მშობლები) სახლში?  
 რამდენიმე თვეში ერთხელ  
 წელიწადში ერთხელ  
 რამდენიმე წელიწადში ერთხელ
3. რამდენად ხშირად ესაუბრები მშობელს რომელიც საზღვარგარეთაა დისტანციურად (სკაიპი, მესენჯერი, ვაიბერი, ინტერნეტის სხვა კონტაქტის საშუალება)?  
 ყოველდღე  
 კვირაში რამოდენიმეჯერ  
 თვეში რამოდენიმეჯერ  
 რამდენიმე თვეში ერთხელ

### **A3. Focus group discussion guideline** (objective ii. qualitative study with schoolteachers)

I would like to thank you very much for your willingness to participate in the study.

My name is Khatia Antia, and I will lead the discussion today. The session will take approximately 60-90 minutes. All information you provide will be kept confidential; Your information will be recorded, saved, analyzed, and may be reported as numbers, codes, or sentences. However, your name will remain confidential and not be shared with third parties. After transcription and translation of the records, all information will be deleted from the recorder.

I would like to understand better issues important to “left-behind children” in your school. In the term “Left-behind”, I mean children who have migrant parent(s). I want to know more about these children, their school performance, well-being, and general health. I ask you to tell me about the situation in your school and your class. There is no right or wrong answer to these questions. Please let me know if any question is unclear, if you want to stop participation, or if you are willing not to discuss about the specific question(s). Your participation in this study is voluntary, and you are free to withdraw from the study at any time. Please also ask any questions you may have during the discussion.

There is no rule to follow. However, if one person speaks at a time, this will help us to understand each other better. You have the right to disagree with opinions expressed by other participants. However, please respect each other.

I am interested to know more about your experience working with children of migrant parents in the class. Sharing your perspective and ideas will help us to develop/promote supportive interventions for children. I am very grateful that you agreed to participate in this study.

Thank you very much for your contribution and for your time. Any questions? Can I start?

#### Key Themes/Topics for Discussion:

- “Left-behind children” in school – general situation.
- Health
- Happiness, life satisfaction
- Well-being
- Behavior
- School performance
- Before and after parent(s) migration – any change?
- Children of migrants and children of non-migrants
- Caregivers – communication with them
- Teachers’ activities in school with respect to children of migrants
- Opinions, ideas

**A4. In-depth interview with school principals: Additional topics/questions** (objective ii. qualitative study with schoolteachers)

Key Themes/Topics:

- Teachers' activities in school concerning children of migrants; guidelines, training.
- How is the issue of left-behind children discussed among teachers in your school? Please tell me more about how you address the issue.
- How is the issue discussed with other school principals in the region? Please tell me more about it.
- How is the issue discussed with local municipalities and authorities?
- Tell me about activities or guidance for schoolteachers you may have in support of left-behind children.
- I would like to know more about how your school personnel's communication/relationships with caregivers.
- I would like to know your opinion about a possible training program for teachers in support of left-behind children.

**A5. Narrative interviews for adolescents: Interview guide** (objective iv. qualitative study with schoolchildren)

Can you tell me what it is like for you to have a mother/father working abroad? Please take me through the experience from when you were small to now. I will not interrupt you. You can just tell me what you feel comfortable to tell me. We have got an hour and I will just listen to you. I am interested in whatever you want to tell me about your life and experience.

**A6. In-depth interviews with adolescents: Interview guide** (Objective iv. qualitative study with schoolchildren)

Focus area	Examples of questions and probes
<b>Introduction</b>	Tell me about yourself.
<b>Family composition</b>	Tell me about your family. <i>Probes:</i> <ul style="list-style-type: none"> <li>- <i>With whom do you live?</i></li> <li>- <i>Which parent is in migration?</i></li> <li>- <i>Who is your main caregiver?</i></li> </ul>
<b>Relationship with family members</b>	Sibling(s) Other family members
<b>Relationship/interaction with friends</b>	Tell me about your friends. <i>Probes:</i> <ul style="list-style-type: none"> <li>- <i>Meeting new people and making new friends</i></li> <li>- <i>Close friends</i></li> <li>- <i>Interaction with friends</i></li> </ul>
<b>Your day</b>	Describe your usual day. <i>Probes:</i> <ul style="list-style-type: none"> <li>- <i>Daily routine, Breakfast</i></li> <li>- <i>Getting ready for school</i></li> <li>- <i>Activities after school</i></li> </ul>
<b>School life – interaction with teachers/class mates</b>	Tell me more about your day at school. <i>Probes:</i> <ul style="list-style-type: none"> <li>- <i>What your day at school looks like?</i></li> <li>- <i>How would you describe your school performance?</i></li> <li>- <i>Tell me more about your interaction with classmates.</i></li> <li>- <i>What about your teachers?</i></li> <li>- <i>Any problems, fights at school?</i></li> <li>- <i>Any missing days at school? If yes, why? What is the reason?</i></li> <li>- <i>In general, how would you describe your school life?</i></li> <li>- <i>If you could make any change, what would you change about your school life? What would your dream school life look like?</i></li> </ul>
<b>Health</b>	How would you describe your physical health in general? <i>Probes:</i> <ul style="list-style-type: none"> <li>- <i>What do you think about your health at this moment?</i></li> <li>- <i>When was the last time you visited doctor?</i></li> <li>- <i>Tell me about your diet.</i></li> <li>- <i>Who takes care of your health – e.g. getting vaccination, regular check-up at GP?</i></li> </ul>

Focus area	Examples of questions and probes
<b>Feelings</b>	<p>Tell me how do you feel about your life today?</p> <p><i>Probes:</i></p> <ul style="list-style-type: none"> <li>- <i>In general, how would you describe your well-being? Happiness?</i></li> <li>- <i>What do you enjoy most, what makes you feel good?</i></li> <li>- <i>When you face some difficult situations - how do you usually deal with such situations?</i></li> </ul>
<b>Your life before parental migration</b>	<p>Tell me more about your parents. How close are you with your parents? What do you like/dislike about your parents?</p> <p><i>Probes:</i></p> <ul style="list-style-type: none"> <li>- <i>Tell me about your life when both of your parents were with you? How was it?</i></li> <li>- <i>What would you usually do together? What would you do with your mom? With your dad?</i></li> <li>- <i>Your parents' involvement in your school life: How was your mom involved? How was your dad involved?</i></li> <li>- <i>What about your school grades, school life? In comparison to today – how would you describe your life back then?</i></li> </ul>
<b>Experience of a parental migration</b>	<p>Take a moment and remember time when your mom/dad (both) went abroad. Tell me, when and how it happened?</p> <p><i>Probes:</i></p> <ul style="list-style-type: none"> <li>- <i>How was it, what did you feel?</i></li> <li>- <i>Tell me about initial period of a parental absence? How often did you communicate? Who was taking care of you when your mom/dad left?</i></li> <li>- <i>What did you usually do when you missed your mom/dad?</i></li> <li>- <i>How long is your mom/dad in migration?</i></li> <li>- <i>How did your life change afterwards (change over time)?</i></li> <li>- <i>Tell me about your family's economic situation after your parent migrated.</i></li> </ul>
<b>Parental return</b>	<p>How often does your mom/dad come home? When was the last time your mom/dad came back? When parent comes back, how long does she/he stay home?</p> <p><i>Probes:</i></p> <ul style="list-style-type: none"> <li>- <i>Tell me, how is your life when your parent comes back? How do you feel when your mom/dad is here?</i></li> <li>- <i>How do you feel with your parent when she/he is with you?</i></li> <li>- <i>How other family members experience your parent's return?</i></li> <li>- <i>What about school? How often your parent comes to school when she/he comes back?</i></li> </ul>
<b>Life today – interaction/relationship with migrant parent</b>	<p>Your mom/dad is in migration today. After having this experience, how would you describe your life today?</p> <p><i>Probes:</i></p> <ul style="list-style-type: none"> <li>- <i>Guide me through your life today (satisfaction)</i></li> <li>- <i>Tell me about your relationship with your migrant mom/dad today.</i></li> <li>- <i>How often and in which way do you usually communicate?</i></li> </ul>
<b>Life today – interaction/relationship with a caregiver</b>	<p>Who takes care of you today (Who is your main caregiver)?</p> <p>Tell me about your relationship with your caregiver.</p> <p><i>Probes:</i></p> <ul style="list-style-type: none"> <li>- <i>Whom do you usually share your problems, secrets with?</i></li> <li>- <i>How do you interact with your caregiver?</i></li> <li>- <i>Any difficulties in your relationship? If yes, describe.</i></li> <li>- <i>If you could change anything in your relationship with your caregiver, what would it be?</i></li> </ul>

Focus area	Examples of questions and probes
<b>Parental labour migration - perception</b>	<p>In your school, there are many kids whose parents work abroad.            What do you generally think about this way of life?            What “parental labour migration” mean to you? How do you see this life event?</p> <p>Probes:</p> <ul style="list-style-type: none"> <li>- <i>What do you think about your parent’s/family’s decision to migrate?</i></li> <li>- <i>If you could, would you change anything?</i></li> <li>- <i>What would be your wish for other families with migrant workers?</i></li> </ul>
<b>Parental migration and COVID-19 – life during pandemic</b>	<p>Tell me about your life during Covid pandemic.</p> <p>Probes:</p> <ul style="list-style-type: none"> <li>- <i>What did you feel when you first hear about this pandemic?</i></li> <li>- <i>Whom did you talk about this?</i></li> <li>- <i>What communication with your migrant parent looked like during pandemic?</i></li> <li>- <i>What about economic situation in your family?</i></li> <li>- <i>What about your school life during pandemic? How did you experience online schooling?</i></li> <li>- <i>How did you interact your classmates, tracers, other friends when schools were closed?</i></li> <li>- <i>Today, schools are open, what coming back to school means to you?</i></li> <li>- <i>In general, how would you describe your life, feelings during pandemic?</i></li> </ul>
<b>Perception on future</b>	<p>Tell me how your future life looks like? How do you see your future self?</p> <p>Probes:</p> <ul style="list-style-type: none"> <li>- <i>If you could change anything in your life today, what would you change? What would your dream life look like?</i></li> <li>- <i>How do you see your life in future?</i></li> <li>- <i>When do you think your mom/dad finally comes back?</i></li> <li>- <i>Your future profession? Aspirations?</i></li> </ul>
<b>Final notes</b>	<p>We came to the end of our interview. Is there anything else you would like to add/share? Anything we have not talked about today?</p>
<p><b><i>Thank you very much for sharing your life experiences with me, thank you for being open. I have enjoyed talking to you very much! I wish you all the best in your life! Good luck!</i></b></p>	

## A7. Youth Self Report (YSR) empirical syndrome scales and items in each scale

Source: (Antia et al. 2023)

<b>YSR Empirical Syndrome Scale</b>	
<i>Item</i>	
<b>I. Anxious/Depressed</b>	
14.	Cries a lot
29.	Fears
30.	Fears school
31.	Fears doing bad
32.	Must be perfect
33.	Feels unloved
35.	Feels worthless
45.	Nervous, tense
50.	Fearful, anxious
52.	Feels too guilty
71.	Self-conscious
91.	Talks or thinks of suicide
112.	Worries
<b>II. Withdraw/Depressed</b>	
5	Enjoys little
42	Rather be alone
65	Won't talk
69	Secretive
75	Shy, timid
102	Lacks energy
103	Sad
111	Withdrawn
<b>III. Somatic Complaints</b>	
47.	Nightmares
51.	Feels dizzy
54.	Tired
56a.	Aches, pains
56b.	Headaches
56c.	Nausea
56d.	Eye problems
56e.	Skin problems
56f.	Stomach-aches
56g.	Vomiting
<b>IV. Social problems</b>	
11.	Dependent
12.	Lonely
25.	Doesn't get along with other kids
27.	Jealous
34.	Others out to get him/her

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## YSR Empirical Syndrome Scale

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- 36. Accident-prone
- 38. Gets teased
- 48. Not liked
- 62. Clumsy
- 64. Prefers younger kids
- 79. Speech problems

**V. Thought problems**

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- 9. Can't get mind off thoughts
- 18. Harms self
- 40. Hears things
- 46. Twitching
- 58. Picks skin
- 66. Repeats acts
- 70. Sees things
- 76. Sleeps less
- 83. Stores things
- 84. Strange behaviour
- 85. Strange ideas
- 100. Trouble sleeping

**VI. Attention Problems**

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- 1. Acts Young
- 4. Fails to finish things
- 8. Can't concentrate
- 10. Can't sit still
- 13. Confused
- 17. Daydreams
- 41. Impulsive
- 61. Poor Schoolwork
- 78. Inattentive

**VII. Rule-breaking behaviour**

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- 2. Drinks alcohol
- 26. Lacks guilt
- 28. Breaks rules
- 39. Bad friends
- 43. Lies, cheats
- 63. Prefers older kids
- 67. Runs away
- 72. Sets fires
- 81. Steals at home
- 82. Steals outside home
- 90. Swears
- 96. Thinks of sex too much
- 99. Uses tobacco
- 101. Truant
- 105. Uses drags

**VIII. Aggressive behaviour**

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- 3. Argues a lot

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**YSR Empirical Syndrome Scale**

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- 16. Mean to others
- 19. Demands attention
- 20. Destroys own things
- 21. Destroys others' things
- 22. Disobedient at home
- 23. Disobedient at school
- 37. Gets in fights
- 57. Attacks people
- 68. Screams a lot
- 86. Stubborn, sullen
- 87. Mood changes
- 89. Suspicious
- 94. Teases a lot
- 95. Temper
- 97. Threatens others
- 104. Loud

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**Other problems**

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- 7. Brags
  - 24. Doesn't eat well
  - 44. Bites nails
  - 53. Overeating
  - 55. Overweight
  - 56h. Other physical problems
  - 74. Shows off
  - 77. Sleeps more
  - 93. Talks too much
  - 110. Wishes to be the opposite sex
-

**A8. Youth Self Report (YSR) empirical syndrome scales:** items in each scale, total number, mean and standard deviation, separate for girls and boys.

Source: (Antia et al. 2023)

YSR Empirical Syndrome Scale		Girls			Boys			Total		
		<i>N</i>	<i>mean</i>	<i>SD</i>	<i>N</i>	<i>mean</i>	<i>SD</i>	<i>N</i>	<i>mean</i>	<i>SD</i>
<b>I. Anxious/Depressed</b>										
14.	Cries a lot	462	0.63	0.82	412	0.12	0.70	874	0.40	0.80
29.	Fears	425	0.81	0.80	391	0.55	0.71	816	0.69	0.77
30.	Fears school	461	0.09	0.32	408	0.06	0.50	869	0.07	0.42
31.	Fears doing bad	463	0.48	0.67	406	0.35	0.72	869	0.42	0.70
32.	Must be perfect	447	0.56	0.69	394	0.39	0.71	841	0.48	0.70
33.	Feels unloved	459	0.53	0.69	407	0.29	0.70	866	0.42	0.70
35.	Feels worthless	460	0.50	0.80	411	0.25	0.50	871	0.38	0.69
45.	Nervous, tense	460	0.80	0.74	408	0.53	0.79	868	0.67	0.77
50.	Fearful, anxious	463	0.62	0.74	408	0.23	0.66	871	0.44	0.73
52.	Feels too guilty	463	0.41	0.62	410	0.29	0.67	873	0.35	0.64
71.	Self-conscious	458	1.00	0.71	402	0.79	0.73	860	0.90	0.73
91.	Talks or thinks of suicide	456	0.20	0.50	401	0.07	0.30	857	0.13	0.43
112.	Worries	430	0.54	0.70	385	0.25	0.54	815	0.40	0.64
<b>II. Withdraw/Depressed</b>										
5	Enjoys little	458	0.78	0.78	405	0.81	1.00	863	0.79	0.89
42	Rather be alone	459	0.83	0.92	407	0.52	0.97	866	0.68	0.95
65	Won't talk	456	0.42	0.61	402	0.40	0.63	858	0.41	0.62
69	Secretive	461	0.92	0.76	400	0.80	1.08	861	0.86	0.93
75	Shy, timid	456	0.72	0.74	398	0.58	0.66	854	0.65	0.71
102	Lacks energy	457	0.61	0.69	403	0.30	0.69	860	0.46	0.71
103	Sad	456	0.45	0.67	402	0.18	0.61	858	0.33	0.66
111	Withdrawn	450	0.63	0.98	397	0.48	0.79	847	0.56	0.90
<b>III. Somatic Complaints</b>										
47.	Nightmares	463	0.62	0.70	409	0.40	0.72	872	0.51	0.72
51.	Feels dizzy	464	0.50	0.71	406	0.18	0.61	870	0.35	0.69
54.	Tired	458	0.82	0.75	409	0.46	0.78	867	0.65	0.79
56a.	Aches, pains	420	0.32	0.80	386	0.16	0.45	806	0.24	0.66
56b.	Headaches	441	0.84	0.88	391	0.36	0.56	832	0.62	0.79
56c.	Nausea	431	0.35	0.60	389	0.17	0.44	820	0.26	0.54
56d.	Eye problems	413	0.17	0.46	379	0.13	0.58	792	0.15	0.52
56e.	Skin problems	445	0.59	0.72	396	0.25	0.52	841	0.43	0.65
56f.	Stomach-aches	452	0.65	0.64	397	0.27	0.49	849	0.47	0.60
56g.	Vomiting	442	0.11	0.52	395	0.66	0.30	837	0.09	0.43
<b>IV. Social problems</b>										
11.	Dependent	455	0.52	0.60	407	0.50	0.73	862	0.51	0.67
12.	Lonely	461	0.59	0.75	410	0.35	0.63	871	0.48	0.70
25.	Doesn't get along with other kids	464	0.48	0.78	410	0.43	0.79	874	0.46	0.78
27.	Jealous	463	0.20	0.46	412	0.14	0.70	875	0.17	0.58

YSR Empirical Syndrome Scale		Girls			Boys			Total		
Item		<i>N</i>	<i>mean</i>	<i>SD</i>	<i>N</i>	<i>mean</i>	<i>SD</i>	<i>N</i>	<i>mean</i>	<i>SD</i>
34.	Others out to get him/her	458	0.19	0.49	406	0.20	0.63	864	0.19	0.56
36.	Accident-prone	461	0.57	0.68	411	0.71	0.91	872	0.64	0.80
38.	Gets teased	462	0.30	0.58	411	0.22	0.76	873	0.26	0.67
48.	Not liked	460	0.39	0.61	405	0.28	0.68	865	0.34	0.65
62.	Clumsy	453	0.40	0.28	400	0.33	0.54	853	0.36	0.58
64.	Prefers younger kids	455	0.34	0.56	401	0.34	0.83	856	0.34	0.70
79.	Speech problems	451	0.16	0.44	387	0.14	0.41	838	0.15	0.43
<b>V. Thought problems</b>										
9.	Can't get mind off thoughts	424	0.89	0.87	375	0.64	0.92	799	0.77	0.91
18.	Harms self	464	0.17	0.46	407	0.59	0.30	871	0.12	0.40
40.	Hears things	449	0.27	0.72	400	0.16	0.63	849	0.22	0.68
46.	Twitching	450	0.35	0.64	393	0.15	0.60	843	0.25	0.63
58.	Picks skin	436	0.35	0.61	388	0.19	0.46	824	0.28	0.55
66.	Repeats acts	426	0.36	0.65	384	0.23	0.52	810	0.30	0.60
70.	Sees things	437	0.20	0.51	391	0.17	0.77	828	0.18	0.65
76.	Sleeps less	458	0.74	0.83	398	0.66	0.86	856	0.70	0.85
83.	Stores things	450	0.73	0.80	393	0.49	0.71	843	0.62	0.77
84.	Strange behaviour	453	0.40	0.67	392	0.25	0.53	845	0.33	0.61
85.	Strange ideas	400	0.46	0.71	323	0.30	0.61	723	0.39	0.67
100.	Trouble sleeping	444	0.45	0.71	388	0.21	0.53	832	0.34	0.64
<b>VI. Attention Problems</b>										
1.	Acts Young	460	0.56	0.59	401	0.46	0.67	861	0.51	0.58
4.	Fails to finish things	456	0.63	0.69	404	0.51	0.65	860	0.57	0.67
8.	Can't concentrate	459	0.72	0.67	411	0.61	0.66	870	0.66	0.66
10.	Can't sit still	460	0.51	0.66	410	0.62	0.68	870	0.56	0.67
13.	Confused	460	0.56	0.73	410	0.28	0.67	870	0.42	0.72
17.	Daydreams	463	1.38	0.67	410	1.15	0.91	873	1.28	0.80
41.	Impulsive	459	0.68	0.64	409	0.60	0.85	868	0.64	0.75
61.	Poor Schoolwork	460	0.57	0.74	402	0.65	0.67	862	0.61	0.71
78.	Inattentive	458	0.66	0.70	400	0.61	0.78	858	0.64	0.74
<b>VII. Rule-breaking behaviour</b>										
2.	Drinks alcohol	455	0.23	0.51	397	0.24	0.51	852	0.24	0.52
26.	Lacks guilt	459	0.57	0.86	408	0.59	0.75	867	0.58	0.81
28.	Breaks rules	458	0.29	0.51	408	0.42	0.81	866	0.35	0.67
39.	Bad friends	460	0.37	0.60	409	0.45	0.64	869	0.40	0.62
43.	Lies, cheats	461	0.43	0.61	409	0.38	0.68	870	0.41	0.64
63.	Prefers older kids	453	0.60	0.69	401	0.60	0.82	854	0.60	0.76
67.	Runs away	462	0.11	0.37	401	0.05	0.26	863	0.08	0.32
72.	Sets fires	458	0.16	0.45	401	0.24	0.54	859	0.20	0.50
81.	Steals at home	457	0.04	0.25	400	0.07	0.31	857	0.05	0.25
82.	Steals outside home	454	0.04	0.23	391	0.06	0.29	845	0.05	0.27
90.	Swears	460	0.43	0.74	403	0.62	0.69	863	0.52	0.72
96.	Thinks of sex too much	454	0.22	0.74	398	0.76	1.34	852	0.47	1.10
99.	Uses tobacco	458	0.06	0.28	404	0.11	0.58	862	0.08	0.45
101.	Truant	458	0.24	0.66	403	0.24	0.50	861	0.24	0.59
105.	Uses drags	446	0.05	0.28	392	0.04	0.25	838	0.05	0.27
<b>VIII. Aggressive behaviour</b>										
3.	Argues a lot	461	0.76	0.69	410	0.71	0.88	871	0.74	0.78

YSR Empirical Syndrome Scale		Girls			Boys			Total		
<i>Item</i>		<i>N</i>	<i>mean</i>	<i>SD</i>	<i>N</i>	<i>mean</i>	<i>SD</i>	<i>N</i>	<i>mean</i>	<i>SD</i>
16.	Mean to others	460	0.17	0.45	407	0.15	0.39	867	0.16	0.42
19.	Demands attention	463	0.58	0.67	411	0.53	0.73	874	0.55	0.70
20.	Destroys own things	463	0.19	0.48	412	0.14	0.58	875	0.17	0.53
21.	Destroys others' things	462	0.07	0.29	409	0.93	0.67	871	0.08	0.50
22.	Disobedient at home	458	0.34	0.57	405	0.28	0.51	863	0.31	0.54
23.	Disobedient at school	453	0.23	0.51	403	0.36	0.71	856	0.29	0.61
37.	Gets in fights	463	0.48	0.65	404	0.66	0.90	867	0.56	0.78
57.	Attacks people	458	0.09	0.33	401	0.10	0.37	859	0.09	0.35
68.	Screams a lot	461	0.45	0.63	400	0.28	0.52	861	0.37	0.59
86.	Stubborn, sullen	461	1.37	0.77	404	0.96	0.83	865	1.18	0.83
87.	Mood changes	459	1.49	0.75	401	1.04	0.84	860	1.28	0.83
89.	Suspicious	460	1.15	0.88	404	0.61	0.74	864	0.90	0.86
94.	Teases a lot	459	0.12	0.54	404	0.16	0.41	863	0.14	0.49
95.	Temper	461	1.09	0.79	403	0.87	0.80	864	0.99	0.80
97.	Threatens others	458	0.10	0.36	401	0.10	0.37	859	0.10	0.36
104.	Loud	457	0.49	0.80	402	0.50	0.77	859	0.49	0.78
<b>Other problems</b>										
7.	Braggs	462	0.21	0.44	410	0.29	0.53	872	0.25	0.49
24.	Doesn't eat well	459	0.79	0.86	409	0.67	0.84	868	0.73	0.85
44.	Bites nails	463	0.46	0.69	410	0.55	0.82	873	0.50	0.75
53.	Overeating	464	0.73	0.83	410	0.75	0.94	874	0.73	0.88
55.	Overweight	462	0.34	0.73	404	0.25	0.68	866	0.30	0.71
56h.	Other physical problems	248	0.18	0.73	301	0.08	0.34	549	0.13	0.55
74.	Shows off	454	0.70	0.73	397	0.37	0.61	851	0.55	0.70
77.	Sleeps more	443	0.47	0.66	385	0.41	0.65	828	0.44	0.66
93.	Talks too much	461	1.10	0.81	403	0.87	0.70	864	0.99	0.78
110.	Wishes to be the opposite sex	456	0.31	0.72	399	0.15	0.73	855	0.23	0.73

# CURRICULUM VITAE

## PERSONAL INFORMATION

Name: Khatia Antia  
Date of Birth: 01.01.1991  
Place of Birth: Khobi, Georgia  
Nationality: Georgian  
Address: Im Neuenheimer Feld 661 Heidelberg, 69120 Germany  
Telephone: +4915227857798  
Email: khatia.antia@uni-heidelberg.de

## EDUCATION

Dr.sc.hum **Doctorate** at Heidelberg Institute of **Global Health**, University Hospital Heidelberg. 2019-2023 (expected graduation 2023).

PgCert Postgraduate Certificate in **International Community Health**: Accessibility, Equity and Human Rights. University of Oslo. 2018

MHA **Masters in healthcare management**: University of Georgia.  
July 2016 (*Thesis Topic: Knowledge of Hepatitis C among beauticians*)

PgCert Postgraduate Certificate in **Public Health**: University of Chester. March 2016  
(Erasmus Exchange 2<sup>nd</sup> part of Masters)

MD Academic Degree of a **Medical Doctor**: Tbilisi State Medical University. 2013

Cert Educational program of Full General Education. Khobi Public School N2, Georgia. 1996-2007

## PROFESSIONAL CAREER/EXPERIENCE

<i>Dates</i>	<i>Location</i>	<i>Company/Project</i>	<i>Position</i>
Jan 2021 - present	Germany/ Georgia	ERASMUS + Building Academic Capacity in Global Health in the Eastern Europe – Central Asia Region. Coordinated by Heidelberg Institute of Global Health	Objective 2: <b>Epidemiology and Biostatistics, Research Methods</b> course coordination team member/lecturer <b>Volunteer</b>
Nov 2021 - present	remote	Lancet Migration EU Hub	<b>Volunteer</b>
Dec 2019 - present	Germany	Heidelberg Institute of Global Health, Heidelberg University	<b>Research to Practice Group</b> member
Sep 2021	Germany/ India	Heidelberg Institute of Global Health & Amrita Institute of Medical Sciences	<b>Course Coordinator /Lecturer</b> DAAD-IVAC
Sep 2017 - Apr 2019	Georgia/ Norway	Norwegian Agency for International Cooperation and Quality Enhancement in Higher Education	<b>Project Manager</b> (University of Georgia)
Sep 2017 - Aug 2019	Georgia	University of Georgia	<b>Specialist</b>
Sep 2018 - Sep 2019	Georgia	University of Georgia	<b>Course Organiser/Lecturer</b> MPH
Sep 2018 - Sep 19	Armenia/ Georgia/ Ukraine	GDSI limited, Ireland. EuropeAid	<b>Project Manager</b> (Georgia)
Sep 2017 - Oct 2018	Georgia	Tbilisi State Medical University (TSMU)	<b>Lecturer</b>
Apr 2017 - Aug 2018	Georgia	Healthcare Association	<b>Coordination Team Member</b>
Jan 2014 - Aug 2015	Georgia	International Insurance Company IRAO	<b>Medical Assistant</b>

## TEACHING EXPERIENCE

Mar 2023	Course: Advanced Epidemiology and Biostatistics. Topic: <b>Systematic Literature Review</b> in Global Health Research. ERASMUS + Building Academic Capacity in Global Health in the Eastern Europe – Central Asia Region.
Sep 2021	Course: <b>People on the move</b> : Global Health and Research Heidelberg Institute of Global Health & Amrita Institute of Medical Sciences
Sep 2018 - Sep 2019	Course: <b>Research Methods</b> in Public Health (Master in Public Health program) School of Health Sciences, The University of Georgia
Sep 2017-Sep 2019	Course: <b>Scientific Research Skills</b> (Educational Program in Medicine). Tbilisi State Medical University.

## AWARDS

DAAD	Doctoral programs in Germany 2019-20, Scholarship.
Eastern Partnership Civil Society Facility	EU-funded project fellowship, Best Fellow 2019
University of Oslo	International Summer School (ISS). Course - International Community Health, University of Oslo. 2018, Scholarship
MASHAV & State of Israel	Professional training – Fellowship, 2017
Swiss-Romanian Cooperation Programme	Professional training – Fellowship, 2017
ERASMUS +	Action 2 MEDEA, The University of Chester. 2015 Scholarship

## LANGUAGES

Georgian	Native
English	Full professional proficiency
Russian	Basic Knowledge
German	Basic Knowledge

## ACKNOWLEDGEMENTS

It all started in September 2015 when I received an ERASMUS + scholarship to study part of my master's in public health at the University of Chester (UoC), England. Studying health sciences in the UK was my dream. I am grateful to Dr. June Keeling for giving me this opportunity, and to the University of Georgia for supporting my scholarship application. I studied Epidemiology, Biostatistics and Research Methods at UoC. After completing the master's program, I found my passion in health research. As I was/am connected to my community, I had always hoped to do something meaningful for the children in Georgia. Therefore, I started to explore the issues that children in my country face and discovered an unmet need; we all have neighbours, friends, relatives, and classmates who live in transnational families, meaning that their parents, spouses, sons, or daughters are labour migrants abroad; and they are divided across borders, where children are geographically separated from their parents. However, they seem to be forgotten, and their needs are often overlooked. The only person who kept sharing experiences and stories of labour migrants' left-behind children was a passionate schoolteacher with profound care for her students – *my mother, Luiza Basilaia* – to whom I am grateful for a great many things in life, among which is inspiring me to dedicate this doctoral research to the left-behind children of migrant workers in Georgia.

After discovering my passion for learning more about left-behind children, I was honoured to receive another scholarship from the State of Israel to participate in the course “Development of Children: Social Emotional Support and Wellbeing” at Haifa University. This course and atmosphere of Jerusalem further inspired me to pursue this career path. After returning to Georgia, I consulted the DAAD information centre, developed a research proposal and searched universities in Germany where I would be able to carry out further research on this topic. This is how I discovered Heidelberg Institute of Global Health (HIGH) and was connected with my academic supervisor. I am more than grateful to apl. Prof. Dr. Volker Winkler for accepting me as his doctoral student, for his trust and continued support through the scholarship/admission process, and for guiding me through exploring left-behind children's health in Georgia. His expertise, professionalism, optimism, and integrity kept me motivated and made my doctoral journey a life-transforming experience. I have learned a great deal from him, and continue to do so.

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## **EIDESSTATTLICHE VERSICHERUNG (AFFIDAVIT)**

### **Eidesstattliche Erklärung zum Antrag auf Zulassung zur Promotion gemäß PromO „Dr.sc.hum.“**

1. Bei der eingereichten Dissertation zu dem Thema  
**“Temporary labour migration and left-behind children: effects of labour migration in Georgia “**  
**Am Institut für Global Health**  
unter Anleitung von Doktorvater apl. Prof. Dr. Volker Winkler  
handelt es sich um meine eigenständig erbrachte Leistung.
2. Ich habe nur die angegebenen Quellen und Hilfsmittel benutzt und mich keiner unzulässigen Hilfe Dritter bedient. Insbesondere habe ich wörtlich oder sinngemäß aus anderen Werken übernommene Inhalte als solche kenntlich gemacht.
3. Die Arbeit oder Teile davon habe ich bislang nicht an einer Hochschule des In- oder Auslands als Bestandteil einer Prüfungs- oder Qualifikationsleistung vorgelegt.
4. Die Richtigkeit der vorstehenden Erklärungen bestätige ich.
5. Die Bedeutung der eidesstattlichen Versicherung und die strafrechtlichen Folgen einer unrichtigen oder unvollständigen eidesstattlichen Versicherung sind mir bekannt. Ich versichere an Eides statt, dass ich nach bestem Wissen die reine Wahrheit erklärt und nichts verschwiegen habe.

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Ort und Datum

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