



# Relationship Between Post-Migration Risks and Holistic Learning Among Syrian Refugee Children in Lebanon

## Summary

Refugee children face a constellation of risks in their home country, when they're on the move, and after they arrive in host countries.

Our research with Syrian refugee children in Lebanon adds to a growing body of evidence that such experiences of adversity can impact the foundational cognitive and behavioral skills that forecast later learning.

The most consistent risk for later learning challenges we identified among Syrian refugee children enrolled in Lebanese public school was being older than expected for the grade in which they were placed, what we call "age for grade." **Syrian refugee children who were older than expected for their grade level had poorer executive functioning, behavioral regulation, literacy, and numeracy skills than children who were a typical age for their grade.**

In addition, children's cognitive and behavioral regulation skills forecasted improvements in children's literacy and numeracy skills. We discuss research, practice, policy, and donor recommendations of these findings.

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## Recommendations

● **Education programs for refugee children should** be designed to support the unique academic, social, emotional, and cognitive needs of young learners borne from experiences of adversity in their home countries, on the move, and in host countries.

● **Policymakers, practitioners, and researchers should** collaborate to generate evidence-based approaches for placing refugee children in grades and providing differentiated instruction.

● **Practitioners should** consider Incorporating strategies – such as social and emotional learning (SEL) programs and practices – that help build children's executive functioning and behavioral regulation skills into education programming for refugee children.

# Introduction

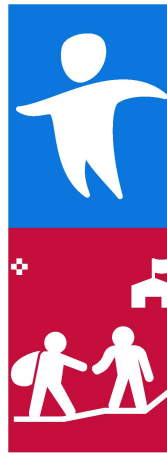


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MILLION

Refugees fled the Syrian civil war in 2011 to neighboring Lebanon

25%

Of people in Lebanon were Syrian refugees by the time the border closed in October 2014



50%

Of all Syrian refugees in Lebanon are children ages 3-18

50%

Of Syrian refugee children in Lebanon remain out of school

Refugee children face a constellation of risks in their home country, when they're on the move, and after they arrive in host countries. These experiences of adversity can threaten the development of foundational cognitive, behavioral, and emotional skills that enable future learning and well-being. The majority of research to date, however, has examined the experiences of refugee children resettled in high-income countries.<sup>1</sup>

Yet 84% of refugees today are hosted in low- and middle-income countries, where the daily experiences of refugee children are quite different than those in high-income contexts.<sup>2</sup>

## Background and Context

Lebanon is host to the highest concentration of refugees per-capita in the world. While the Lebanese Ministry of Education and Higher Education has opened Lebanese public schools to some Syrian refugee students through the provision of second-shift classes, nearly half of the Syrian children remain out of school.

Those attending Lebanese public schools continued to face challenges to learning and retention, including limited support for their various academic and social and emotional needs; fragmented and inconsistent policies for and approaches to enrollment and grade-level placement;<sup>3</sup> and bullying, violence, or discrimination by teachers and other students.<sup>4</sup> Beyond challenges in schools, life for Syrian refugee children in Lebanon was

further complicated at the time this study was conducted by a policy context in which freedom of movement and work opportunities were strictly curtailed for refugees.<sup>5</sup> This had radiating impacts on perceptions of community safety, household economy, health, and schooling.<sup>6</sup> Such “daily difficulties” can define the conditions of daily life for refugee families, with implications for refugee children’s well-being and learning. To date, however, research with child refugee populations has focused either on mental health and psychosocial distress<sup>7</sup> or on educational outcomes.<sup>8</sup> This compartmentalized approach neglects the dynamic transactions that take place between foundational cognitive, emotional, and behavioral skills and processes—which have significant implications for children’s learning and development.<sup>9</sup> In this study, we aim to address these gaps by examining post-migration risk factors that Syrian refugee children encounter in their daily lives in Lebanon.

We then identify plausible cognitive, emotional, and behavioral skills and processes through which these risk factors may shape children’s learning outcomes. By focusing on the role of these malleable foundational skills, we also identify strengths in refugee children’s paths towards resilient and positive development in the face of adversity. Utilizing a set of data collected from primary school-aged Syrian refugee children and their parents in two regions of Lebanon, we aim to:

**1. Identify a range of salient risks** within the community, household, and individually for Syrian refugee children's development and later academic learning

**2. Identify important cognitive, emotional, and behavioral skills and processes** that forecast Syrian refugee children's later literacy and numeracy performance

**3. Test whether these cognitive, emotional, and behavioral skills and processes** are some of the mechanisms by which the risks Syrian refugee children encounter affect their later literacy and numeracy skills

## Participants and Setting

This study utilizes data from 448 children, collected as part of a large-scale randomized control trial evaluating non-formal educational and social-emotional remedial support programs provided to Syrian refugee children enrolled in Lebanese public schools.<sup>11</sup>

These children were assigned to the waitlist control group and assessed twice, in November 2016—prior to attending the remedial support program—and four months later, in March 2017. Participating children ranged from 5 to 13 years old ( $M = 9.08$ ,  $SD = 1.90$ ), attending grades 1-7 in Lebanese public schools (median = 2).

## Measures and Analysis

The current study utilizes data collected from parent interviews, child direct assessments, and performance-based measures, as well as child self-report and assessor reports. The risk factors, covariates, and the cognitive, emotional, and behavioral skills and processes were measured at Time 1 (November 2016).

Children's literacy and numeracy performance were assessed at Time 2 (March 2017). We used a statistical approach called structural equation modelling (SEM) to examine the relationships between risks, processes and learning outcomes. For more detail on the analytic approach, see [Kim et al., 2020](#).<sup>12</sup>

### Measures of Cognitive, Emotional, and Behavioral Developmental Processes and Learning Outcomes

Domain	Cognitive Processes	Emotional Processes	Behavioral Processes	Learning Outcomes	Learning Outcomes
Construct	Executive Function: Working Memory Inhibitory Control	Internalizing Symptoms	Behavioural Regulation	Literacy Competence	Numeracy Competence
Measure	RACER: Rapid Assessment of Cognitive and Emotional Regulation	MFQ: Mood and Feelings Questionnaire	PSRA: Preschool Self-Regulation Assessment	EGRA: Early Grade Reading Assessment	EGMA: Early Grade Math Assessment
Method	Child tablet performance-based assessment	Child report	Assessor report of child observation	Child performance-based assessment	Child performance-based assessment
Example items/subtasks	Spatial delayed match-to-sample task	"I didn't enjoy anything at all"	"Pays attention to instructions and demonstration"	Letter recognition task	Number identification task


## Aim 1

# Identify a range of salient risks within the community, household, and individually for Syrian refugee children's development and later academic learning

Cognitive, Emotional, Behavioral, and Academic Outcomes

	Working memory	Inhibitory control	Internalizing symptoms	Behavioral regulation	Literacy	Numeracy
Child in poor health				↘		
Child labor						↘
Interrupted schooling						
Overage-for-grade	↘	↘		↘	↘	↘
Lives in tent						
Moved in the past year			↘			
Lives in unsafe community	↘			↗		


**How to interpret this table**

 Having a risk is associated with lower levels of the outcome:

**Example #1** Being overage for grade forecasts lower literacy skills.

**Example #2** Moving in the past year is associated with fewer internalizing symptoms.

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 Having a risk is associated with higher levels of the outcome:

**Example #3** Living in an unsafe community is associated with higher behavior regulation.

**Syrian refugee children face a constellation of risks in Lebanon, and these risks were associated with children's developmental processes and literacy and numeracy performance in both expected and unexpected ways.**

The risk we identified that was most consistently associated with difficulties in developmental and learning outcomes was being older than expected for the grade in which they were placed, what we call "age for grade." Syrian refugee children who were older than expected for their grade level had poorer executive functioning and behavioral regulation skills than children who were a typical age for their grade. Age for grade also forecasted future decrements in literacy and math skills.

There are several possible explanations for why being older than expected for the grade level is associated with cognitive, behavioral, and academic difficulties.

**First**, being older than expected for a grade can be a marker that a child has faced numerous and cumulative risks that interrupted schooling or impaired learning. In this study we only focused on risks in the host country, and it is possible that these other unmeasured risks—such as exposure to war events in Syria—are driving the relationship with cognitive, behavioral, and academic difficulties.

**Second**, being older than expected for a grade can mean being in classroom without same-age peers or developmentally appropriate teaching practices, routines, and learning materials. In this case, prolonged exposure to such a learning environment may itself result in cognitive and behavioral challenges.

**Third**, and conversely, there may be a tendency to place older children with lower cognitive, behavioral, and/or academic skills in lower grades in Lebanese public schools.

## Aim 2

**Identify cognitive, emotional, and behavioral skills and processes that forecast Syrian refugee children’s later literacy and numeracy performance**

**We find that children’s working memory and behavioral regulation skills forecast literacy and numeracy performance four months later, adjusting for all risk factors and covariates.**

In addition, children’s inhibitory control positively predicted literacy. These findings are aligned with research in the United States that has consistently found associations between executive function and behavioral regulation skills and academic success.<sup>13</sup>

In contrast, internalizing symptoms did not predict literacy or numeracy scores.

Although this finding was inconsistent with the limited research on refugee children’s mental health and academic outcomes in high-income countries,<sup>14</sup> it is not unexpected given the weak and mixed evidence on the link between internalizing symptoms and academic outcomes in the U.S. literature.<sup>15</sup>

## Aim 3

**Test whether these cognitive, emotional, and behavioral skills and processes are some of the mechanisms by which the risks Syrian refugee children encounter affect their later literacy and numeracy skills.**

**We find evidence that both children’s working memory and behavioral regulation skills may act as “transmission mechanisms” by which experiences of adversity translate into difficulties with academic learning.**

These two key mechanisms of change—working memory and behavioral regulation—are malleable and can be improved with the right types of support.

While these findings are correlational and cannot be interpreted as causal, these results provide initial evidence that education programs for refugee children can best support the development of literacy and numeracy skills by additionally targeting children’s working memory and behavioral regulation skills.

## Implications

This is among the first comprehensive and rigorous studies to look at the interaction between risks refugee children face living in a middle-income host-countries; cognitive, emotional, and behavioral skills and processes; and learning outcomes.

Such information is critically needed to inform the design, implementation, and investments in programs, practices, and policies to promote refugee children’s holistic learning, as well as to further the field research agenda.



## Practitioners should ...

- **Design education programs to support the unique academic, social, emotional, and cognitive needs** of young learners borne from experiences of adversity in their home countries, on the move, and in host countries.
- **Consider both refugee children’s age and their learning levels when placing refugee children in classrooms** and designing their curricular experiences. Where age-blended classrooms are necessary, practitioners should use differentiated instructional and pedagogical strategies appropriate for children’s ages. Practitioners should also monitor referrals to psychosocial support and other services to assess whether there is evidence that children who are older than expected for their grade are having additional difficulties.

Incorporate evidence-based strategies that promote children’s executive functioning and behavioral regulation skills—such as SEL practices and curricula—into education programming for refugee children.



## Policymakers should ...

- **Uphold obligations under international treaties and covenants** that protect the civil, political, economic, social, and cultural rights of all people – including refugee children – in their territories. Adhering to such commitments can help reduce the risks refugee children face, creating the healthy and safe spaces for children to thrive.
- **Ensure universal access for refugee children to high-quality learning opportunities** to prevent or counter the negative effects of interruptions in schooling and impairments in learning that may lead to being “overage for grade.”
- **Invest in evidence-based approaches for placing refugee children in grades** and providing differentiated instruction.
- **Ensure learning standards and curricula for host-country and refugee children** include a focus on academic, social, emotional, and cognitive skills.



## Researchers should...

- **Partner with practitioners and policymakers to develop evidence-based and systematic approaches to placing refugee children in grades.** This includes studying the conditions and circumstances that lead to refugee children being older than expected for their grade level as well as the long-term consequences for children.
- **Partner with practitioners and policymakers to experimentally test** whether specific programs, practices, and activities promote children’s behavioral regulation and working memory skills.



## Donors should ...

- **Make a concerted effort to align priority setting, grantmaking, and knowledge building processes towards a common vision** of enabling practice-policy-research coordination to support children’s holistic learning and development.
- **Philanthropic, bi-lateral, and multi-lateral donors should create consultation mechanism to ensure adequate funding.** This includes small research grants for innovative, exploratory topics as well as large, multi-year grants to support research-practice-policy partnerships.

# Endnote

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This policy brief is based on the article, "[Post-migration risks, developmental processes, and learning among Syrian refugee children in Lebanon,](#)" recently published in the Journal for Applied Developmental Psychology (JADP), a high-impact journal dedicated to international research on child development. The research was conducted in collaboration with the International Rescue Committee and supported by Dubai Cares and the E-Cubed Research Envelope.



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