Are the neural systems of reading impacted by interrupted schooling? What we can learn from Syrian Refugee children recently resettled in Canada

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Aim

Aim: To examine how individual differences in the *duration* and *age* when a child experienced interrupted schooling impact neural activation for language and reading.

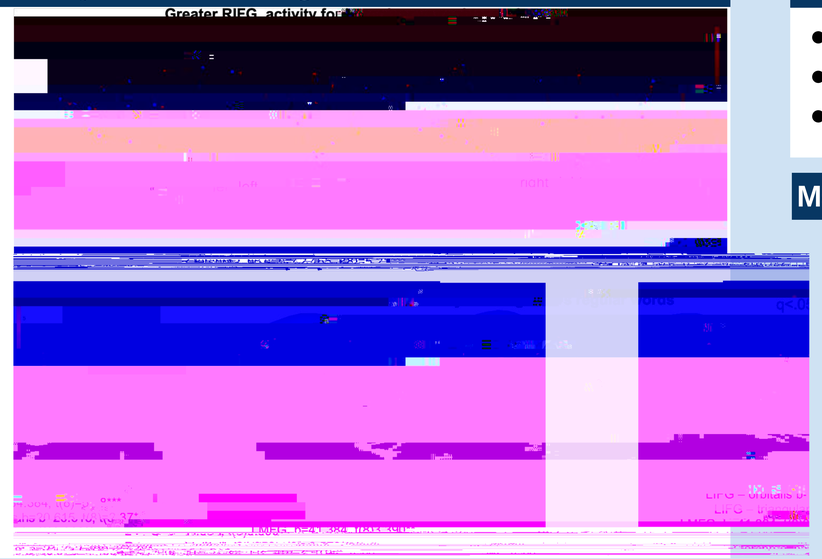
Hypothesis: Younger age of reading exposure is associated with the development of canonical neural reading network and reading skills

Background

- 75,000 Syrian refugees have settled in Canada (50% children).
- For refugee children, displacement and migration often correspond with period of interrupted schooling.
- Little is known about the specific effects of interrupted schooling across the neurodevelopmental trajectory for reading.

Research Questions

How does interrupted education at different ages:
1) Impact reading?
2) Impact the neural systems that support reading?



Preliminary Neural Findings: 2 Case Studies

Measure	Child A	Child B
Age	13y	11y
Grade	7	5
Age of Resettlement	8y	6y
Behavioral Measures	**Raw; SS**	**Raw; SS**
WIAT	12; 88	10; 85
CTOPP Elision	29; 95	30; 105
Letter-Word ID	63; 97	65; 110
Word Attack	21; 88	25; 105
Reading Comprehension	37; 93	30; 81

***Continuous* formal literacy instruction at school**

***Interrupted* literacy instruction resumes in a new language**

Participants

- Syrian refugee children between ages 10-16
- Resettled in Canada between 2014-2017
- Resumed schooling between ages 6-11

Methods

Imaging Tasks

Modality

Lexicality

Condition	Example
Regular	start / قرأ
Irregular	bouquet / NA
Pseudoword	nobkey / جَرَقْ
False Font / Vocoded Speech	/

Behavioural Measures

English & Arabic Language and Literacy
Phonological Awareness (CTOPP)
Vocabulary (WIAT)
Decoding (WJ-IV)
Reading Comprehension (WJ-IV)

Nonverbal IQ (K-BIT)
Background questionnaire with migration and education histories (ALEQ)

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