

Performance of the International Development and Early Learning Assessment (IDELA) when used with children with functional difficulties in Kenya

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Background

SDGs - leaving no one behind - has generated increased interest in children with disabilities as well as early childhood development.

Tools that reliably measure early childhood development are essential in identifying challenges, tracking interventions and improving policies for their benefit.

Not much literature on how these tools are used and their performance among children with disabilities especially in resource-constrained & humanitarian settings in Africa.

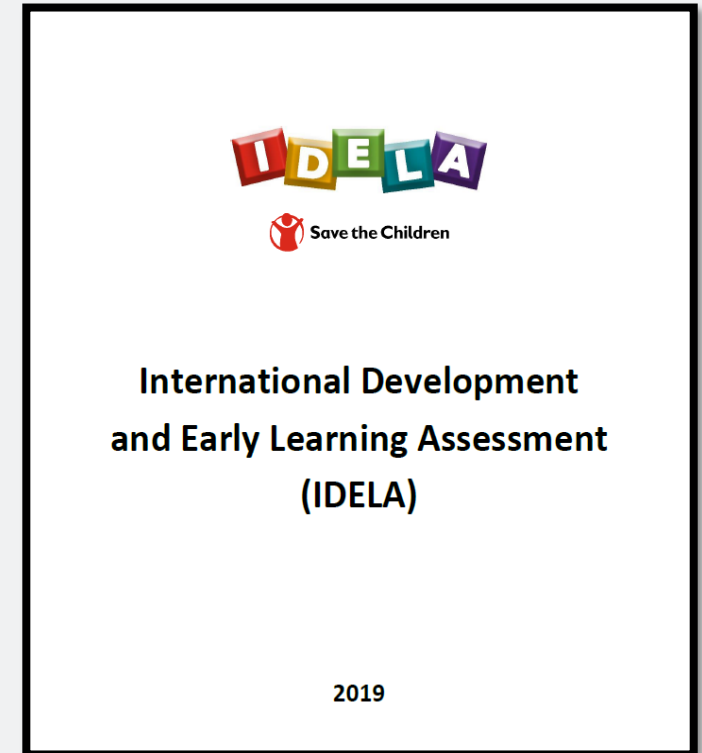
Background

In Kenya, a multi-stakeholder inclusive ECDE project designed (2021- 2023) to develop and implement affordable and contextually-appropriate disability-inclusive ECDE interventions.

Nested research study: Impact evaluation to measure effectiveness of the disability-inclusive education interventions on developmental scores of children.

Developmental scores were measured using the IDELA tool because: age-appropriate, validated for use in LMICs, includes guidelines for children with disabilities.

IDELA domains = emergent literacy, emergent numeracy, socio-emotional, motor development.



Objectives

This presentation shares findings on the performance of the IDELA tool when adapted and used with children with disabilities.

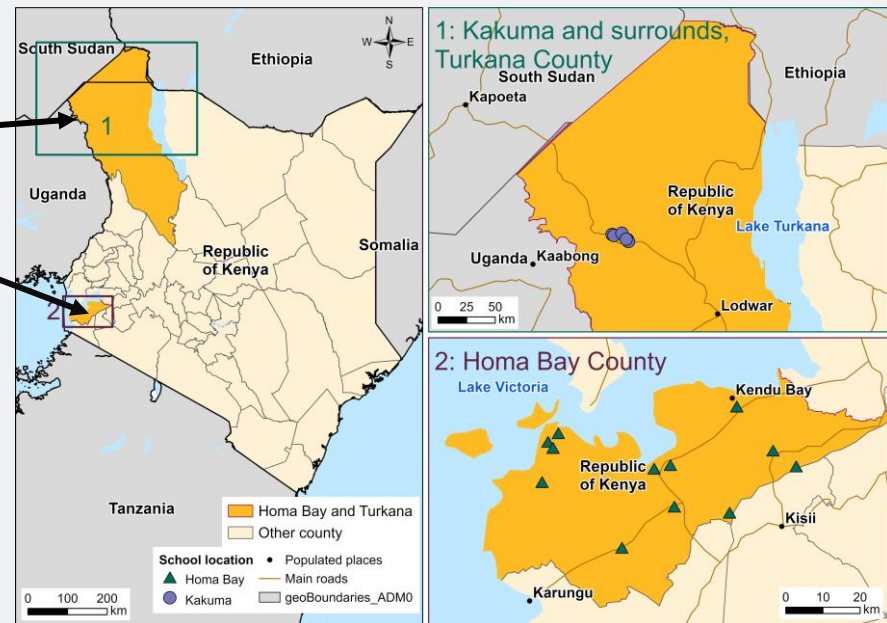
Specifically, we assessed:

- Patterns of missed responses – responses to questions not attempted or scored because the child was unable to engage for whatever reason.
- Internal consistency of each IDELA domain.

Methods

Study sites

Two areas of implementation in Kenya – Homa Bay and Turkana counties (in and around Kakuma refugee camp and Kalobeyei settlement)



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Study design

A school-based cluster non-randomised control trial in 18 schools.

12 schools in Homa Bay & 6 schools in Kakuma.

Main tools:

- UNICEF/ Washington Group Child Functioning Module (CFM) - to assess for functional difficulties.
- IDELA - to assess developmental scores.
- We used data from 2 cohorts of children who started pre-primary 1 (PP1) during 2 school years.

Cohort	Baseline*	Endline
1	Sep/Oct 2021	Oct/Nov 2022
2	May/June 2022	Sep/Oct 2023

Definitions

Functional difficulty based on Washington Group cutoffs.

Functional difficulties were grouped:

1. Sensory/physical/communication/self-care - seeing, hearing, motor skills.
2. Behavioural or emotional - playing, anxiety, depression, accepting change, making friends.
3. Cognitive - learning, concentrating or remembering.

Mean proportion of missing responses calculated as follows:

- i. For each child, number of missed responses divided by the number of questions, per domain.
- ii. Calculated mean proportion for groups of children

Analyses

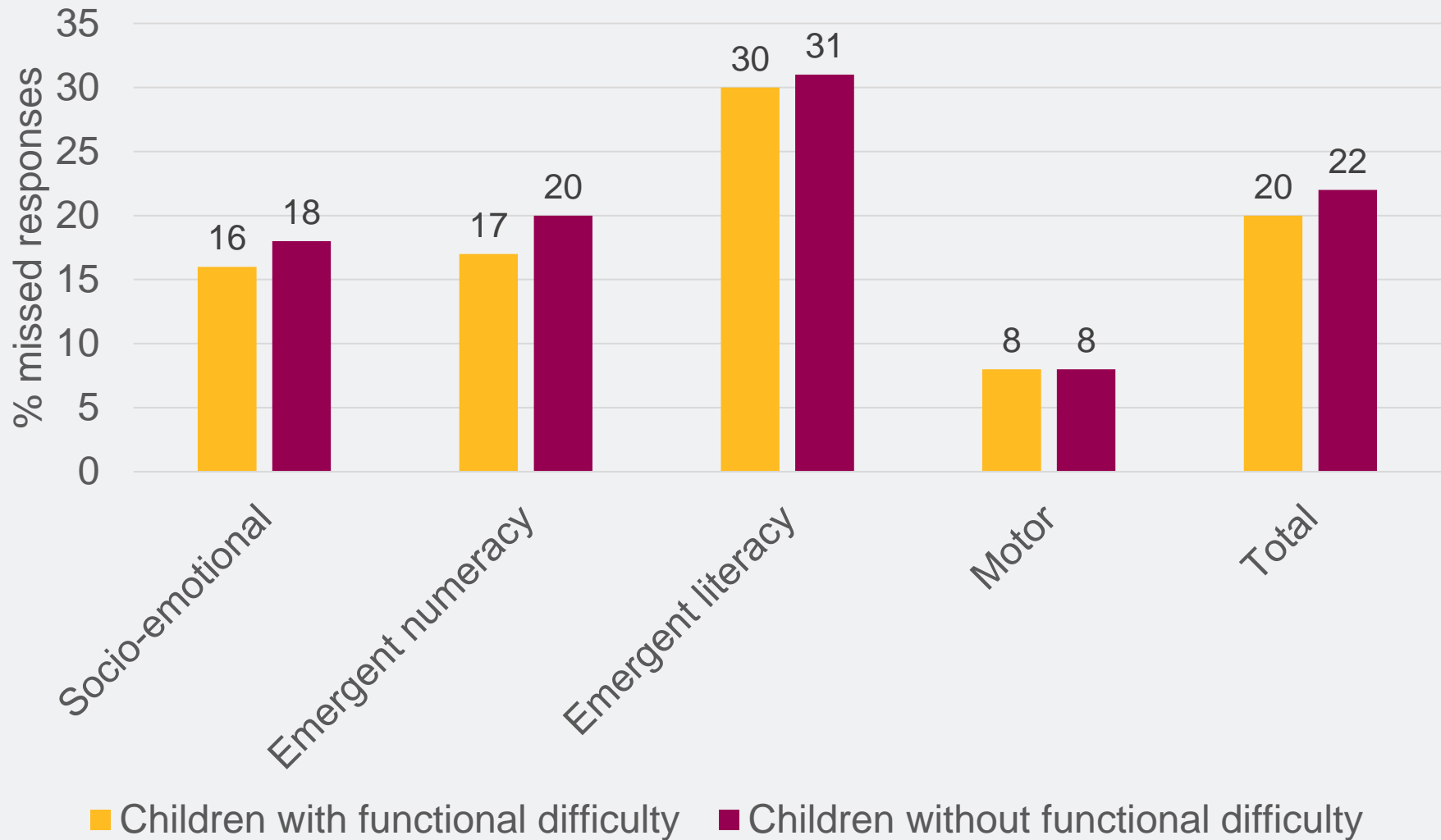
We determined:

- a. The mean proportion of missing responses, overall and within each domain, for children with & without functional difficulties.
- b. Associations of proportion of missed responses with socio-demographic variables using linear regression adjusted for age and accounting for clustering within schools.
- c. Internal consistency of each IDELA domain using standardized Cronbach's alpha.

Results of baseline characteristics

	Total	Homa Bay	Kakuma
Cohort size	1748	1074	674
No. with baseline IDELA (% of cohort)	1606 (92%)	1030 (96%)	576 (85%)
Sex - number (% girls)	793 (49%)	504 (49%)	289 (50%)
Median age at enrolment in study (years)	5	5	5
No. with functional difficulty (% of cohort)	271 (16%)	212 (20%)	46 (8%)
No. with sensory, physical, communication or self-care difficulty (% of cohort)	121 (8%)	92 (9%)	29 (5%)
No. with behavioural or emotional difficulty (% of cohort)	138 (9%)	121 (12%)	17 (3%)
No. with cognitive difficulty (% of cohort)	64 (4%)	59 (6%)	5 (1%)

Mean percentage of missed responses by domain



Linear regression model results, clustered SEs, adjusted for age - baseline

	Socio-emotional	Emergent numeracy	Emergent literacy	Motor	Total
Age	-2.8 [-4.4, -1.2]	-4.1 [-5.5, -2.7]	-1.8 [-2.7, -0.9]	-3.2 [-5.8, -0.7]	-3.0 [-4.2, -1.8]
Sex: Girls vs Boys	0.1 [-1.7, 1.9]	-1.6 [-3.3, 0.1]	-0.4 [-1.7, 1.0]	1.0 [-0.7, 2.6]	-0.6 [-1.9, 0.7]
FD status: with vs without functional difficulty	-0.5 [-2.8, 1.8]	0.4 [-1.9, 2.8]	0.2 [-1.3, 1.7]	2.0 [-0.9, 5.0]	0.4 [-0.9, 1.7]
Physical/ sensory/ communication/ self-care FD: yes vs no	0.6 [-2.3, 3.6]	1.5 [-1.5, 4.5]	-0.7 [-2.7, 1.3]	0.2 [-3.7, 4.2]	0.4 [-1.4, 2.3]
Behaviour/ emotional FD: yes vs no	-1.0 [-4.7, 2.8]	-1.3 [-4.3, 1.7]	0.4 [-1.7, 2.6]	4.5 [0.4, 8.6]	0.0 [-2.1, 2.2]
Cognitive FD: yes vs no	2.0 [-2.3, 6.3]	1.6 [-3.8, 7.1]	1.6 [-2.2, 5.4]	4.2 [-1.2, 9.7]	2.0 [-1.4, 5.4]
Region: Kakuma vs Homa Bay	3.6 [-1.5, 8.7]	7.7 [4.3, 11.1]	1.4 [-1.2, 4.1]	6.8 [1.3, 12.3]	4.8 [1.5, 8.1]

Data are model estimates and associated 95% Confidence Intervals

Standardized Cronbach alpha IDELA domains - baseline

		Socio-emotional	Emergent numeracy	Emergent literacy	Motor
Overall		0.8	0.9	0.9	0.9
Region	Homa Bay	0.8	0.9	0.9	0.9
	Kakuma	0.8	0.9	0.9	0.9
FD status	With FD	0.8	0.9	0.9	0.9
	Without FD	0.8	0.9	0.9	0.9
Type of FD	Physical etc	0.8	0.9	0.9	0.9
	Behaviour/emotion	0.8	0.9	0.9	0.9
	Cognitive	0.8	0.9	0.9	0.9

Discussion and conclusions

- Patterns of missing responses and internal consistency were similar for both children with and without functional difficulties.
- Findings highlights feasibility of including children with FDs in assessments and that disability should not be used as a reason not to assess these children.
- Consistent with qualitative research that showed IDELA could be completed with most children with functional difficulties without omitting items or making substantive adaptations.

Limitations

- Unable to assess 100% of sample using IDELA for various reasons. We don't think the group that we didn't assess was systematically different from those that we did (unconfirmed).
- Findings relate to children enrolled in ECDE. Some children with particular types of disability were under-represented.
- Some children were incorrectly categorised - non-disclosure of functional difficulty status by caregivers.

Recommendations

Further exploration is needed to understand:

- Reasons for missed responses.
- Reasons behind higher levels missingness in motor development domain for those that have behaviour/emotional difficulties.
- Differences in patterns of missed responses by region.

Thank you!



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