

Midline findings:

MELQO student assessment in FkW intervention and control schools

The importance of pre-primary education in Tanzania

Tanzania has achieved high rates of primary student enrollment, however students' learning outcomes remain disappointingly poor and below government targets. Poor performance in early grade reading and math indicates that students are not acquiring foundational academic skills. Given students' underperformance across the primary grades, Tanzania is striving to improve teacher quality and effectiveness, the learning environment, and other factors critical to student performance.

Globally, policymakers and implementers have increasingly focused on early childhood education (ECE) given the growing global awareness of the critical role that quality pre-primary education plays in laying the foundation for improved school readiness and learning outcomes. Early childhood investments in quality education yield an estimated return of 7 to 16 percent annually for programs that target vulnerable children.¹ Earlier investments in human development are cheaper and more impactful² than compensatory programs later in life, which are more expensive and less effective.

Assessing students pre-literacy, pre-numeracy, and social development

We conducted a student assessment study among pre-primary children to gather preliminary evidence on learning and development. We explored whether Fursa kwa Watoto (FkW) leads to improved student learning and development outcomes at the pre-primary level based on the schools' intervention status (schools with the FkW intervention versus control schools).

Measuring Early Learning Quality and Outcomes (MELQO) tool

We assessed pre-primary students using the Measuring Early Learning Quality and Outcomes (MELQO) tool. The MELQO Consortium—which includes UNESCO, UNICEF, the World Bank, The Brookings Institution, the Global Partnership for Education, and the World Health Education—developed and validated the MELQO. The tool takes about 35 minutes to administer and can be used with children ages 3 to 6 years. MELQO assesses pre-literacy, pre-numeracy, socio-emotional skills, and areas that support learning across multiple domains, such as executive function, persistence, and self-regulation.

Data collection

We conducted the MELQO assessment at two points, in May and November 2017. Our sample includes 131 randomly selected schools in Kilimanjaro and Mwanza regions. Schools were randomly assigned to the FkW intervention or the control group so that the study groups were similar on school-level characteristics before the intervention was implemented. Our field team worked with teachers to group students by age. In each of these schools, we listed the children's ages and randomly selected 12 students—ages five or six—to participate in the assessment.

¹ Naudeau et al., 2011.

² Heckman, 2008.

We plan to follow the students for one additional year and conduct a follow-up assessment that combines MELQO and items from the Early Grade Reading and Mathematics Assessments, which are appropriate for older children, in order to assess whether the effects of FkW persist one year later.

Results

At baseline, we found that student scores were comparable across the intervention and control schools. However, students in Kilimanjaro tended to perform better on the assessments than students in Mwanza, likely due to regional differences in socioeconomic status and levels of overcrowding. **At midline**, we found that FkW is having positive effects on pre-numeracy and health knowledge outcomes in Kilimanjaro, but no statistically significant effects in Mwanza or overall. The following tables include MELQO baseline and midline results, student learning gains over the school year, and impact estimates of FkW on student learning, both overall and broken down into the two regions where FkW is being implemented.

Exhibit 1. Primary outcome measures
Students in Mwanza (n = 623) and Kilimanjaro (n = 617)
Collected May and November 2017

For each domain, scores for individual items were totaled and converted to a 100-point scale.

Table 1. Changes in primary outcome measures

Variable	FkW Intervention group n = 621			Control group n = 619			(G) FkW Impacts on student learning outcomes [C-F]
	(A) Baseline mean (May)	(B) Midline mean (November)	(C) Within- year learning [B-A]	(D) Baseline mean (May)	(E) Midline mean (November)	(F) Within- year learning [E-D]	
Pre-numeracy score	42.5	51.8	9.3	42.3	49.8	7.5	1.7
Pre-literacy score	45.0	55.9	10.9	43.3	54.6	11.3	-0.4
Socio-emotional score	56.8	69.4	12.5	54.8	65.4	10.6	2.0
Executive function score	27.4	30.2	2.7	25.7	28.7	3.0	-0.3
Health score	61.7	67.1	5.4	62.1	64.9	2.8	2.6

* Difference statistically significant at the .05 level.

** Difference statistically significant at the .01 level.

- Columns A, B, D, and E show regression-adjusted means for the intervention and control group at baseline and midline, respectively.
- Columns C and F reflect the change in average scores over time, by group.
- Column G is the intervention impact.

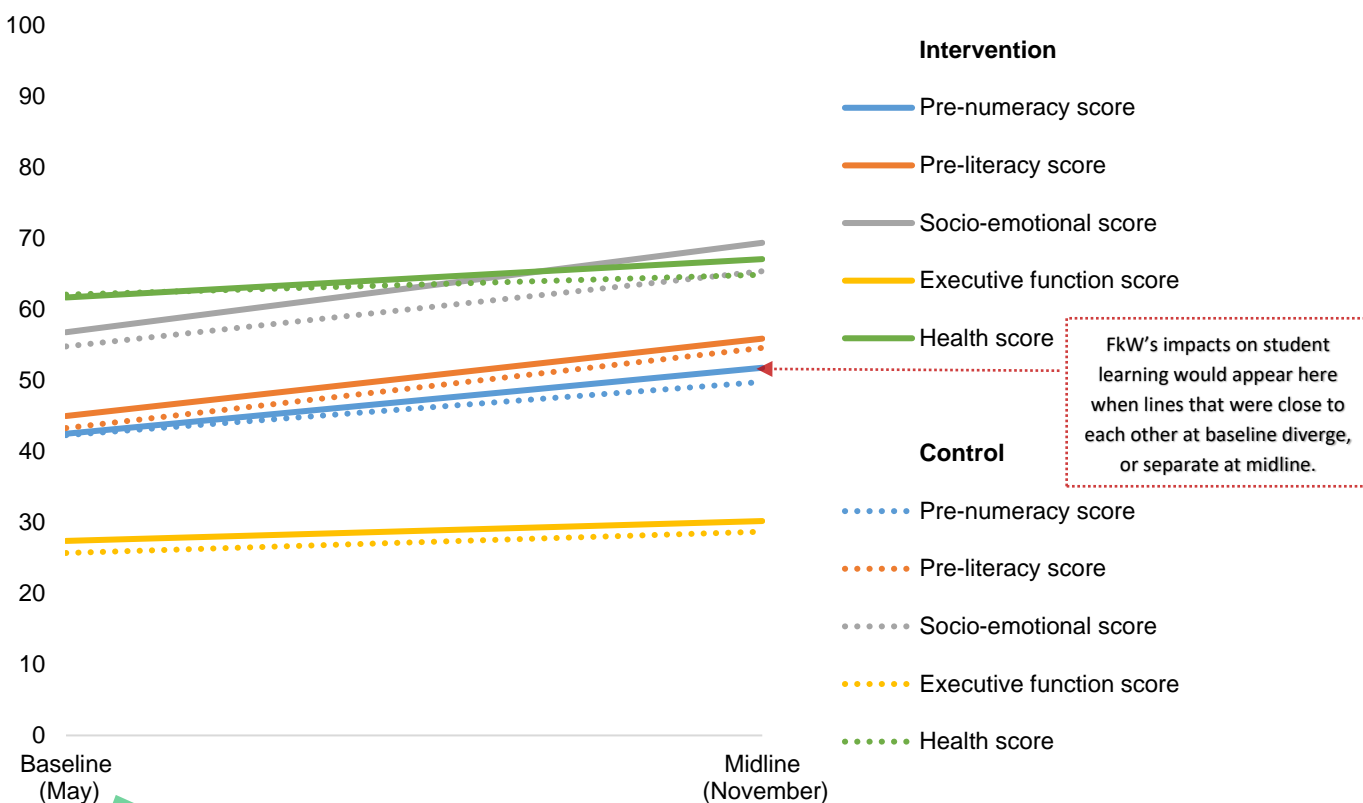
These data reflect those students aged five and six who were present in both May and November.

Columns A, B, D, and E show the average scores for each study group at baseline and midline, respectively.

Columns C and F show how much students' have improved between the middle & end of the school year.

Column G shows the difference in student learning between FkW schools and control schools. Differences are statistically significant, if starred *.

Figure 1. Changes in primary outcome measures for all students
(Regional figures are on page 6)



Finding: Student learning outcomes in FkW intervention and control schools were very similar to each other at baseline (shown here by the closeness of the corresponding solid and dotted lines). This balance early in the study helps us to identify the impacts of the FkW intervention.

Source: Fursa kwa Watoto - Baseline and midline, May and November 2017

* Difference in mean growth rates is statistically significant at the .05 level.

** Difference in mean growth rates is statistically significant at the .01 level.

Exhibit 2. Primary outcome measures, by region

For each domain, scores for individual items were totaled and converted to a 100-point scale.

Table 2. Change in primary outcome measures, by region

Variable	FkW Intervention group n = 621			Control group n = 619			(G) FkW impacts on student learning outcomes [C-F]
	(A) Baseline mean (May)	(B) Midline mean (November)	(C) Within-year learning [B-A]	(D) Baseline mean (May)	(E) Midline mean (November)	(F) Within-year learning [E-D]	
Mwanza (N=623)							
Pre-numeracy score	40.2	50.6	10.4	38.4	50.9	12.5	-2.2
Pre-literacy score	37.1	52.0	14.9	35.7	52.1	16.4	-1.5
Socio-emotional score	41.6	60.4	18.7	40.8	58.4	17.5	1.2
Executive function score	22.2	27.1	4.9	21.0	28.0	7.0	-2.1
Health score	56.7	63.6	6.9	55.1	64.1	9.0	-2.1
Kilimanjaro (N=617)							
Pre-numeracy score	44.8	53.0	8.2	46.4	48.7	2.3	5.9**
Pre-literacy score	52.7	59.7	7.0	51.2	57.2	6.0	1.0
Socio-emotional score	71.8	78.2	6.4	69.3	72.7	3.4	3.0
Executive function score	32.6	33.2	0.6	30.5	29.4	-1.1	1.7
Health score	66.7	70.5	3.8	69.3	65.7	-3.6	7.5*

* Difference is statistically significant at the .05 level.

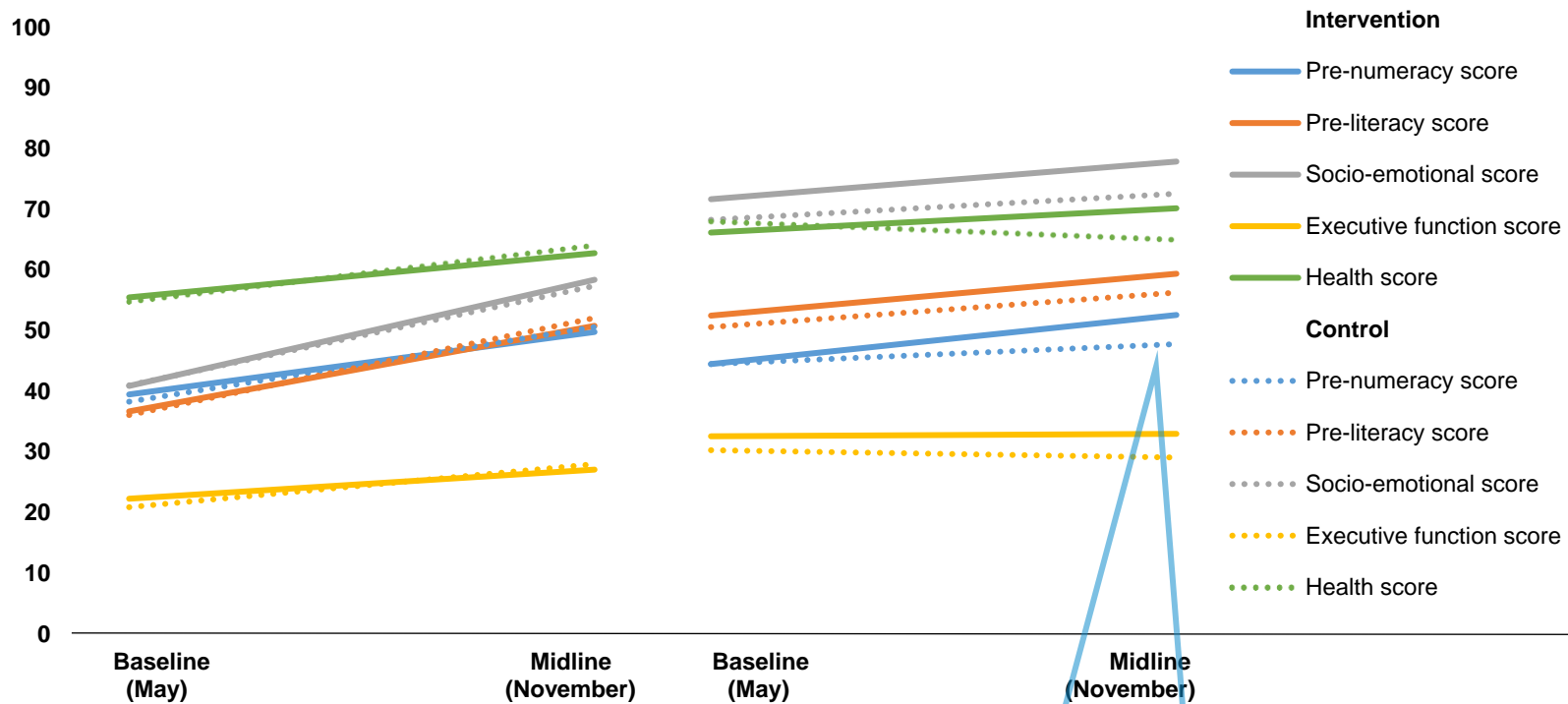
** Difference is statistically significant at the .01 level.

Note: Columns A, B, D, and E show regression-adjusted means for the intervention group and control group at baseline and midline, respectively. C and F reflect the change in average scores over time, by group. Column G is the intervention impact. These data reflect those students aged five and six who were present in both May and November. A student attrition analysis is available in the technical note (forthcoming).

Finding: Although control students in Mwanza appear to learn more than FkW intervention students on some outcomes, these are not “statistically significant” differences. We think they are likely to reflect random chance rather than true differences between groups.

Finding: FkW had positive impacts on pre-numeracy skills and student health knowledge in Kilimanjaro. FkW intervention students increased their knowledge of math and number concepts by an average of 8 points, compared to only a 2-point increase in the control group.

Figure 2. MELQO scores for intervention and control groups at baseline and midline by region



Source: Fursa kwa Watoto - Baseline and midline, May and November 2017

* Difference in mean growth rates is statistically significant at the .05 level.

** Difference in mean growth rates is statistically significant at the .01 level.

Finding: In Kilimanjaro, we see the positive, statistically significant impacts on pre-numeracy scores and health scores among intervention students compared to control students.

**Table 3. Pre-numeracy outcomes
Students in Mwanza (n = 623) and Kilimanjaro (n = 617)
Collected May and November 2017**

For each domain, scores for individual items were totaled and converted to a 100-point scale.

Variable	FkW Intervention group n = 621			Control group n = 619			(G) FkW impacts on student learning outcomes [C-F]
	(A) Baseline mean (May)	(B) Midline mean (November)	(C) Within- year learning [B-A]	(D) Baseline mean (May)	(E) Midline mean (November)	(F) Within- year learning [E-D]	
Pre-numeracy score	42.5	51.8	9.3	42.3	49.8	7.5	1.7
Spatial vocabulary: <i>Child points to the picture the enumerator asks</i>	57.2	60.5	3.3	56.6	57.3	0.7	2.6
Verbal counting: <i>Child is asked to count out loud (highest number >= 10)</i>	74.4	84.2	9.8	75.9	82.2	6.3	3.5
Producing a set: <i>Child is asked to produce a set out of 20 objects</i>	44.7	59.4	14.7	44.0	56.1	12.0	2.7
Number comparison: <i>Child picks the highest/lowest of two numbers</i>	36.1	47.5	11.4	35.6	44.9	9.3	2.1
Mental addition: <i>Child is described situation where balls are added</i>	17.2	25.5	8.3	19.0	25.5	6.5	1.8
Mental transformation: <i>What shape results from combining pieces?</i>	31.2	31.1	-0.1	29.6	31.9	2.3	-2.4
Spatial vocabulary: <i>Child points to the picture the enumerator asks</i>	36.9	54.3	17.3	35.3	50.8	15.5	1.9

* Difference in mean growth rates is statistically significant at the .05 level.

** Difference in mean growth rates is statistically significant at the .01 level.

Source: Fursa kwa Watoto - Baseline and midline, May and November 2017

Note: Columns A, B, D, and E show regression-adjusted means for the intervention group and control group at baseline and midline, respectively. C and F reflect the change in average scores over time, by group. Column G is the intervention impact. These data reflect those students aged five and six who were present in both May and November. A student attrition analysis is available in the technical note (forthcoming).

Table 4. Pre-numeracy outcomes, by region

For each domain, scores for individual items were totaled and converted to a 100-point scale.

Variable	FkW Intervention group n = 621			Control group n = 619			(G) FkW impacts on student learning outcomes [C-F]
	(A) Baseline mean (May)	(B) Midline mean (November)	(C) Within- year learning [B-A]	(D) Baseline mean (May)	(E) Midline mean (November)	(F) Within- year learning [E-D]	
Mwanza (N = 623)							
Pre-numeracy score	40.2	50.6	10.4	38.4	50.9	12.5	-2.2
Spatial vocabulary: <i>Child points to the picture the enumerator asks</i>	48.3	53.4	5.1	44.9	55.5	10.6	-5.4
Verbal counting: <i>Child is asked to count out loud (highest number >= 10)</i>	72.1	79.2	7.1	71.4	77.5	6.0	1.1
Producing a set: <i>Child is asked to produce a set out of 20 objects</i>	42.9	58.2	15.4	41.1	58.3	17.2	-1.9
Number comparison: <i>Child picks the highest/lowest of two numbers</i>	35.6	50.4	14.8	34.0	48.7	14.7	0.1
Mental addition: <i>Child is described situation where balls are added</i>	18.5	28.9	10.4	15.6	30.0	14.4	-4.1
Mental transformation: <i>What shape results from combining pieces?</i>	27.9	31.2	3.2	26.0	33.8	7.8	-4.5
Kilimanjaro (N = 617)							
Pre-numeracy score	44.8	53.0	8.2	46.4	48.7	2.3	5.9**
Spatial vocabulary: <i>Child points to the picture the enumerator asks</i>	66.0	67.6	1.6	68.7	59.2	-9.5	11.1**
Verbal counting: <i>Child is asked to count out loud (highest number >= 10)</i>	76.7	89.1	12.5	80.6	87.2	6.6	5.9
Producing a set: <i>Child is asked to produce a set out of 20 objects</i>	46.5	60.6	14.1	47.1	53.7	6.6	7.5*
Number comparison: <i>Child picks the highest/lowest of two numbers</i>	36.5	44.6	8.1	37.3	41.0	3.7	4.4
Mental addition: <i>Child is described situation where balls are added</i>	16.0	22.2	6.2	22.5	20.9	-1.6	7.9*
Mental transformation: <i>What shape results from combining pieces?</i>	34.4	31.0	-3.4	33.3	29.9	-3.5	0.0

* Difference is statistically significant at the .05 level.

** Difference is statistically significant at the .01 level.

Source: Fursa kwa Watoto - Baseline and midline, May and November 2017

Note: Columns A, B, D, and E show regression-adjusted means for the intervention and control group at baseline and midline, respectively. C and F reflect the change

Finding: The positive impacts on pre-numeracy in Kilimanjaro are being driven mostly by FkW intervention students' improved spatial vocabulary, ability to produce a set, and mental addition skills.

in average scores over time, by group. Column G is the intervention impact. Analysis includes students aged five and six present in both May and November.

**Table 5. Emerging literacy skills
Students in Mwanza (n = 623) and Kilimanjaro (n = 617)
Collected May and November 2017**

For each domain, scores for individual items were totaled and converted to a 100-point scale.

Variable	FkW Intervention group n = 621			Control group n = 619			(G) FkW impacts on student learning outcomes [C-F]
	(A) Baseline mean (May)	(B) Midline mean (November)	(C) Within- year learning [B-A]	(D) Baseline mean (May)	(E) Midline mean (November)	(F) Within- year learning [E-D]	
	Pre-literacy score	45.0	55.9	10.9	43.3	54.6	
Expressive vocabulary: <i>Child asked to name things they eat, and animals</i>	90.0	94.6	4.6	88.5	94.6	6.1	-1.5
Initial sound ID: <i>Child asked to identify initial sound in a word</i>	4.9	8.4	3.5	3.5	6.9	3.4	0.1
Letter name knowledge: <i>Child pointed to letter and asked to name it</i>	15.7	28.5	12.8	15.6	30.5	14.9	-2.1
Listening comprehension: <i>Child asked questions about a short story</i>	53.1	53.6	0.5	52.7	51.3	-1.5	2.0
Writes name	40.3	65.1	24.8	36.3	62.8	26.5	-1.7

* Difference in mean growth rates is statistically significant at the .05 level.

** Difference in mean growth rates is statistically significant at the .01 level.

Source: Fursa kwa Watoto - Baseline and midline, May and November 2017

Note: Columns A, B, D, and E show regression-adjusted means for the intervention group and control group at baseline and midline, respectively. C and F reflect the change in average scores over time, by group. Column G is the intervention impact. These data reflect those students aged five and six who were present in both May and November. A student attrition analysis is available in the technical note (forthcoming).

Table 6. Emerging literacy skills, by region

For each domain, scores for individual items were totaled and converted to a 100-point scale.

Variable	FkW Intervention group n = 621			Control group n = 619			(G) FkW impacts on student learning outcomes [C-F]
	(A) Baseline mean (May)	(B) Midline mean (November)	(C) Within- year learning [B-A]	(D) Baseline mean (May)	(E) Midline mean (November)	(F) Within- year learning [E-D]	
Mwanza (N = 623)							
Pre-literacy score	37.1	52.0	14.9	35.7	52.1	16.4	-1.5
Expressive vocabulary: <i>Child asked to name things they eat, and animals</i>	86.4	93.2	6.8	83.2	94.3	11.1	-4.3
Initial sound ID: <i>Child asked to identify initial sound in a word</i>	6.3	7.4	1.1	3.3	6.3	3.0	-1.9
Letter name knowledge: <i>Child pointed to letter and asked to name it</i>	12.1	23.4	11.3	13.0	29.0	16.0	-4.7
Listening comprehension: <i>Child asked questions about a short story</i>	41.4	48.2	6.9	39.1	46.7	7.6	-0.7
Writes name	20.5	59.4	39.0	21.0	58.7	37.8	1.2
Kilimanjaro (N = 617)							
Pre-literacy score	52.7	59.7	7.0	51.2	57.2	6.0	1.0
Expressive vocabulary: <i>Child asked to name things they eat, and animals</i>	93.6	96.0	2.4	94.1	94.9	0.8	1.6
Initial sound ID: <i>Child asked to identify initial sound in a word</i>	3.6	9.4	5.8	3.8	7.6	3.9	2.0
Letter name knowledge: <i>Child pointed to letter and asked to name it</i>	19.2	33.5	14.2	18.3	32.1	13.8	0.4
Listening comprehension: <i>Child asked questions about a short story</i>	64.6	58.8	-5.8	66.8	56.1	-10.8	5.0
Writes name	59.7	70.6	10.9	52.3	67.1	14.8	-3.9

* Difference in mean growth rates is statistically significant at the .05 level.

** Difference in mean growth rates is statistically significant at the .01 level.

Source: Fursa kwa Watoto - Baseline and midline, May and November 2017

Note: Columns A, B, D, and E show regression-adjusted means for the intervention group and control group at baseline and midline, respectively. C and F reflect the change in average scores over time, by group. Column G is the intervention impact. These data reflect those students aged five and six who were present in both May and November. A student attrition analysis is available in the technical note (forthcoming).

**Table 7. Socio-emotional skills
Students in Mwanza (n = 623) and Kilimanjaro (n = 617)
Collected May and November 2017**

For each domain, scores for individual items were totaled and converted to a 100-point scale.

Variable	FkW Intervention group n = 621			Control group n = 619			(G) FkW impacts on student learning outcomes [C-F]
	(A) Baseline mean (May)	(B) Midline mean (November)	(C) Within- year learning [B-A]	(D) Baseline mean (May)	(E) Midline mean (November)	(F) Within- year learning [E-D]	
Socio-emotional score	56.8	69.4	12.5	54.8	65.4	10.6	2.0
Perspective taking: <i>Child shown picture of hurt girl and is asked</i>	57.7	65.9	8.2	56.7	64.1	7.4	0.7
Understanding feelings: <i>Child asked what makes him/her happy/unhappy</i>	56.0	72.9	16.9	52.9	66.6	13.7	3.2

* Difference in mean growth rates is statistically significant at the .05 level.

** Difference in mean growth rates is statistically significant at the .01 level.

Source: Fursa kwa Watoto - Baseline and midline, May and November 2017

Note: Columns A, B, D, and E show regression-adjusted means for the intervention group and control group at baseline and midline, respectively. C and F reflect the change in average scores over time, by group. Column G is the intervention impact. These data reflect those students aged five and six who were present in both May and November. A student attrition analysis is available in the technical note (forthcoming).

Table 8. Socio-emotional skills, by region

For each domain, scores for individual items were totaled and converted to a 100-point scale.

Variable	FkW Intervention group n = 621			Control group n = 619			(G)
	(A) Baseline mean (May)	(B) Midline mean (November)	(C) Within- year learning [B-A]	(D) Baseline mean (May)	(E) Midline mean (November)	(F) Within- year learning [E-D]	FkW impacts on student learning outcomes [C-F]
Mwanza (N = 623)							
Socio-emotional score	41.6	60.4	18.7	40.8	58.4	17.5	1.2
Perspective taking: <i>Child shown picture of hurt girl and is asked</i>	41.9	55.0	13.1	41.4	54.8	13.4	-0.3
Understanding feelings: <i>Child asked what makes him/her happy/unhappy</i>	41.4	65.7	24.4	40.3	61.9	21.6	2.8
Kilimanjaro (N = 617)							
Socio-emotional score	71.8	78.2	6.4	69.3	72.7	3.4	3.0
Perspective taking: <i>Child shown picture of hurt girl and is asked</i>	73.3	76.6	3.3	72.6	73.8	1.2	2.1
Understanding feelings: <i>Child asked what makes him/her happy/unhappy</i>	70.3	79.9	9.6	66.0	71.5	5.6	4.0

* Difference in mean growth rates is statistically significant at the .05 level.

** Difference in mean growth rates is statistically significant at the .01 level.

Source: Fursa kwa Watoto - Baseline and midline, May and November 2017

Note: Columns A, B, D, and E show regression-adjusted means for the intervention group and control group at baseline and midline, respectively. C and F reflect the change in average scores over time, by group. Column G is the intervention impact. These data reflect those students aged five and six who were present in both May and November. A student attrition analysis is available in the technical note (forthcoming).

**Table 9. Executive function
Students in Mwanza (n = 623) and Kilimanjaro (n = 617)
Collected May and November 2017**

For each domain, scores for individual items were totaled and converted to a 100-point scale.

Variable	FkW Intervention group n = 621			Control group n = 619			(G) FkW impacts on student learning outcomes [C-F]
	(A) Baseline mean (May)	(B) Midline mean (November)	(C) Within- year learning [B-A]	(D) Baseline mean (May)	(E) Midline mean (November)	(F) Within- year learning [E-D]	
Executive function score	27.4	30.2	2.7	25.7	28.7	3.0	-0.3
Head, shoulders, knees, toes: <i>Point to opposite body part mentioned, level I</i>	31.9	38.3	6.4	27.1	35.1	7.9	-1.5
Head, shoulders, knees, toes: <i>Point to opposite body part mentioned, level II</i>	13.8	22.5	8.7	12.8	20.0	7.2	1.5
Forward digit span: <i>Child is asked to repeat strings of numbers</i>	57.8	56.4	-1.4	57.4	56.1	-1.3	-0.1
Backward digit span: <i>Child asked to repeat number strings backwards</i>	6.3	3.4	-2.9	5.3	3.2	-2.1	-0.8
Fine motor skill score <i>Child asked to draw simple figures</i>	13.3	15.9	2.6	12.2	13.0	0.8	1.8

* Difference in mean growth rates is statistically significant at the .05 level.

** Difference in mean growth rates is statistically significant at the .01 level.

Source: Fursa kwa Watoto - Baseline and midline, May and November 2017

Note: Columns A, B, D, and E show regression-adjusted means for the intervention group and control group at baseline and midline, respectively. C and F reflect the change in average scores over time, by group. Column G is the intervention impact. These data reflect those students aged five and six who were present in both May and November. A student attrition analysis is available in the technical note (forthcoming).

Table 10. Executive function, by region

For each domain, scores for individual items were totaled and converted to a 100-point scale.

Variable	FkW Intervention group n = 621			Control group n = 619			(G) FkW impacts on student learning outcomes [C-F]
	(A) Baseline mean (May)	(B) Midline mean (November)	(C) Within- year learning [B-A]	(D) Baseline mean (May)	(E) Midline mean (November)	(F) Within- year learning [E-D]	
Mwanza (N = 623)							
Executive function score	22.2	27.1	4.9	21.0	28.0	7.0	-2.1
Head, shoulders, knees, toes: <i>Point to opposite body part mentioned, level I</i>	21.4	32.7	11.4	17.0	35.6	18.6	-7.2
Head, shoulders, knees, toes: <i>Point to opposite body part mentioned, level II</i>	7.5	17.3	9.8	6.3	18.1	11.7	-1.9
Forward digit span: <i>Child is asked to repeat strings of numbers</i>	56.7	56.6	-0.2	55.9	55.5	-0.4	0.2
Backward digit span: <i>Child asked to repeat number strings backwards</i>	3.4	1.7	-1.7	4.7	2.6	-2.0	0.4
Fine motor skill score <i>Child asked to draw simple figures</i>	8.7	16.2	7.6	8.3	13.5	5.3	2.3
Kilimanjaro (N = 617)							
Executive function score	32.6	33.2	0.6	30.5	29.4	-1.1	1.7
Head, shoulders, knees, toes: <i>Point to opposite body part mentioned, level I</i>	42.2	43.7	1.5	37.6	34.5	-3.1	4.6
Head, shoulders, knees, toes: <i>Point to opposite body part mentioned, level II</i>	20.1	27.7	7.6	19.6	22.0	2.4	5.2
Forward digit span: <i>Child is asked to repeat strings of numbers</i>	58.8	56.2	-2.6	59.0	56.8	-2.1	-0.4
Backward digit span: <i>Child asked to repeat number strings backwards</i>	9.2	5.0	-4.1	6.0	3.8	-2.2	-1.9
Fine motor skill score <i>Child asked to draw simple figures</i>	17.9	15.7	-2.2	16.2	12.4	-3.8	1.6

* Difference in mean growth rates is statistically significant at the .05 level.

** Difference in mean growth rates is statistically significant at the .01 level.

Source: Fursa kwa Watoto - Baseline and midline, May and November 2017

Note: Columns A, B, D, and E show regression-adjusted means for the intervention group and control group at baseline and midline, respectively. C and F reflect the change in average scores over time, by group. Column G is the intervention impact. These data reflect those students aged five and six who were present in both May and November. A student attrition analysis is available in the technical note (forthcoming).

**Table 11. Health and safety awareness
Students in Mwanza (n = 623) and Kilimanjaro (n = 617)
Collected May and November 2017**

For each domain, scores for individual items were totaled and converted to a 100-point scale.

Variable	FkW Intervention group n = 621			Control group n = 619			(G) FkW impacts on student learning outcomes [C-F]
	(A) Baseline mean (May)	(B) Midline mean (November)	(C) Within- year learning [B-A]	(D) Baseline mean (May)	(E) Midline mean (November)	(F) Within- year learning [E-D]	
Health score	61.7	67.1	5.4	62.1	64.9	2.8	2.6
Identify body parts: <i>Child asked to identify body parts and functions</i>	61.4	67.7	6.4	59.5	65.9	6.4	-0.0
Caring for health: <i>Child asked about sanitary practices</i>	40.8	50.1	9.3	38.7	44.5	5.8	3.4
Identifying nutritious food: <i>Child asked which is the healthiest plate</i>	58.1	59.9	1.8	64.9	60.3	-4.7	6.5
Identifying unsafe thing: <i>Child asked about safety practices</i>	86.6	90.7	4.0	85.3	88.9	3.6	0.4

* Difference in mean growth rates is statistically significant at the .05 level.

** Difference in mean growth rates is statistically significant at the .01 level.

Source: Fursa kwa Watoto - Baseline and midline, May and November 2017

Note: Columns A, B, D, and E show regression-adjusted means for the intervention group and control group at baseline and midline, respectively. C and F reflect the change in average scores over time, by group. Column G is the intervention impact. These data reflect those students aged five and six who were present in both May and November. A student attrition analysis is available in the technical note (forthcoming).

Table 12. Health and safety awareness, by region

For each domain, scores for individual items were totaled and converted to a 100-point scale.

Variable	FkW Intervention group n = 621			Control group n = 619			(G) FkW impacts on student learning outcomes [C-F]
	(A) Baseline mean (May)	(B) Midline mean (November)	(C) Within- year learning [B-A]	(D) Baseline mean (May)	(E) Midline mean (November)	(F) Within- year learning [E-D]	
Mwanza (N = 623)							
Health score	56.7	63.6	6.9	55.1	64.1	9.0	-2.1
Identify body parts: <i>Child asked to identify body parts and functions</i>	59.8	69.4	9.6	56.3	66.7	10.3	-0.7
Caring for health: <i>Child asked about sanitary practices</i>	30.2	40.4	10.2	26.7	41.6	14.9	-4.7
Identifying nutritious food: <i>Child asked which is the healthiest plate</i>	56.5	56.2	-0.3	60.6	61.6	1.0	-1.3
Identifying unsafe thing: <i>Child asked about safety practices</i>	80.2	88.5	8.3	76.8	86.7	9.8	-1.6
Kilimanjaro (N = 617)							
Health score	66.7	70.5	3.8	69.3	65.7	-3.6	7.5*
Identify body parts: <i>Child asked to identify body parts and functions</i>	62.8	66.1	3.2	62.7	65.1	2.4	0.9
Caring for health: <i>Child asked about sanitary practices</i>	51.3	59.6	8.3	51.2	47.5	-3.6	11.9
Identifying nutritious food: <i>Child asked which is the healthiest plate</i>	59.7	63.6	3.8	69.4	58.9	-10.5	14.4*
Identifying unsafe thing: <i>Child asked about safety practices</i>	93.0	92.8	-0.2	94.1	91.3	-2.8	2.6

* Difference in mean growth rates is statistically significant at the .05 level.

** Difference in mean growth rates is statistically significant at the .01 level.

Source: Fursa kwa Watoto - Baseline and midline, May and November 2017

Note: Columns A, B, D, and E show regression-adjusted means for the intervention group and control group at baseline and midline, respectively. C and F reflect the change in average scores over time, by group. Column G is the intervention impact. These data reflect those students aged five and six who were present in both May and November. A student attrition analysis is available in the technical note (forthcoming).

Finding: The positive impacts on health knowledge in Kilimanjaro are being driven by students' improved ability to identify nutritious food and their knowledge of sanitary practices, like handwashing.

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