

Supplementary File 3

Pre-specified Analyses: multilevel mixed effects Poisson regression

Primary Outcome: Proportion of five key potential handwashing events that were accompanied by HWWS (both hands) for children aged 5-12 years

Table 1: Effect of intervention on the proportion of key handwashing events accompanied by HWWS

	Interventio n	Control	Rate Ratio *	95% CI	P value
Baseline (n, %)	67 (12.4%)	50 (10.6%)	1.2	0.6-2.5	0.54
Week 4 (n, %)	189 (38.9%)	146 (33.0%)	1.2	0.7-1.8	0.53
Week 12 (n, %)	189 (40.3%)	208 (50.1%)	0.9	0.6-1.3	0.57
Week 16 (n, %)	198 (48.3%)	174 (45.9%)	1.2	0.8-1.7	0.47

Multilevel mixed effects Poisson regression for rates accounting for clustering at the household level
* Adjusted for age, sex, number of children aged 5–12 in the household, and number of household members earning an income

Secondary Outcome 1: Proportion of all observed handwashing events (handwashing with water) where soap was used

Table 2: Effect of intervention on the proportion of all handwashes that used soap

	Interventio n	Control	Risk Ratio*	95% CI	P value
Baseline (n, %)	81 (20.2%)	63 (17.4%)	1.4	0.8-2.4	0.26
Week 4 (n, %)	205 (49.4%)	157 (46.2%)	1.1	0.8-1.5	0.76
Week 12 (n, %)	196 (51.3%)	228 (63.5%)	0.9	0.7-1.2	0.32
Week 16 (n, %)	215 (58.7%)	194 (59.0%)	1.0	0.8-1.4	0.84

Multilevel mixed effects Poisson regression for rates accounting for clustering at the household level
* Adjusted for age, sex, number of children aged 5–12 in the household, and number of household members earning an income

Secondary Outcome 2: Total number of observed HWWS events across all timepoints

Table 3: Effect of intervention on the total number of handwashes with soap

	Intervention	Control	Count Ratio *	95% CI	P value
Baseline (n)	81	63	1.5	0.8-2.9	0.22
Week 4 (n)	205	157	1.3	0.8-2.0	0.34
Week 12 (n)	196	228	0.9	0.6-1.4	0.68
Week 16 (n)	215	194	1.2	0.7-2.1	0.42

Multilevel mixed effects Poisson regression for counts accounting for clustering at the household level
* Adjusted for age, sex, number of children aged 5–12 in the household, and number of household members earning an income

Robustness Check: adjusting analysis for enumerator identity

Primary Outcome: Proportion of five key potential handwashing events that were accompanied by HWWS (both hands) for children aged 5-12 years

Table 1: Effect of intervention on the proportion of key handwashing events accompanied by HWWS

	Interventio n	Control	Rate Ratio *	95% CI	P value
Baseline (n, %)	67 (12.4%)	50 (10.6%)	1.0	0.6-1.6	1.00
Week 4 (n, %)	189 (38.9%)	1.46 (33.0%)	1.2	0.8-1.7	0.46
Week 12 (n, %)	189 (40.3%)	208 (50.1%)	0.8	0.5-1.1	0.13
Week 16 (n, %)	198 (48.3%)	174 (45.9%)	1.1	0.8-1.5	0.60

Poisson for rates generalized estimating equations analyses accounting for clustering at the household level

* Adjusted for age, sex, number of children aged 5–12 in the household, number of household members earning an income, and enumerator identity

Secondary Outcome 1: Proportion of all observed handwashing events (handwashing with water) where soap was used

Table 2: Effect of intervention on the proportion of all handwashes that used soap

	Interventio n	Control	Risk Ratio*	95% CI	P value
Baseline (n, %)	81 (20.2%)	63 (17.4%)	1.1	0.7-1.7	0.68
Week 4 (n, %)	205 (49.4%)	157 (46.2%)	1.0	0.8-1.4	0.78
Week 12 (n, %)	196 (51.3%)	228 (63.5%)	0.8	0.6-1.1	0.16
Week 16 (n, %)	215 (58.7%)	194 (59.0%)	1.0	0.8-1.3	0.89

Poisson for rates generalized estimating equations analyses accounting for clustering at the household level

* Adjusted for age, sex, number of children aged 5–12 in the household, number of household members earning an income, and enumerator identity

Secondary Outcome 2: Total number of observed HWWS events across all timepoints

Table 3: Effect of intervention on the total number of handwashes with soap

	Intervention	Control	Count Ratio *	95% CI	P value
Baseline (n)	81	63	1.1	0.7-1.7	0.78
Week 4 (n)	205	157	1.2	0.8-1.7	0.47
Week 12 (n)	196	228	0.8	0.5-1.1	0.10
Week 16 (n)	215	194	1.1	0.8-1.4	0.70

Poisson for counts generalized estimating equations analyses accounting for clustering at the household level

* Adjusted for age, sex, number of children aged 5–12 in the household, number of household members earning an income, and enumerator identity

Subgroup Analyses 1: Age of child observed

Subgroup 1: Child observed in age group 5-8

	Interventio n	Control	Rate Ratio *	95% CI	P value
Baseline (n, %)	67 (12.4%)	50 (10.6%)	1.4	0.7-2.9	0.42
Week 4 (n, %)	189 (38.9%)	1.46 (33.0%)	1.4	0.9-2.3	0.18
Week 12 (n, %)	189 (40.3%)	208 (50.1%)	0.9	0.6-1.3	0.58
Week 16 (n, %)	198 (48.3%)	174 (45.9%)	1.0	0.7-1.4	0.98

Poisson for rates generalized estimating equations analyses accounting for clustering at the household level
* Adjusted for sex, number of children aged 5–12 in the household, and number of household members earning an income.

Subgroup 2: Child observed in age group 9-12

	Interventio n	Control	Rate Ratio *	95% CI	P value
Baseline (n, %)	67 (12.4%)	50 (10.6%)	0.7	0.3-1.5	0.35
Week 4 (n, %)	189 (38.9%)	1.46 (33.0%)	1.0	0.6-1.6	0.90
Week 12 (n, %)	189 (40.3%)	208 (50.1%)	0.7	0.4-1.0	0.07
Week 16 (n, %)	198 (48.3%)	174 (45.9%)	1.2	0.7-1.8	0.54

Poisson for rates generalized estimating equations analyses accounting for clustering at the household level
* Adjusted for sex, number of children aged 5–12 in the household, and number of household members earning an income.

Subgroup Analyses 2: Number of children aged 5-12 living in the household

Primary Outcome: Proportion of five key potential handwashing events that were accompanied by HWWS (both hands) for children aged 5-12 years

Subgroup 1: Number of children aged 5-12 living in the household = ≤3

	Interventio n	Control	Rate Ratio *	95% CI	P value
Baseline (n, %)	67 (12.4%)	50 (10.6%)	0.8	0.4-1.6	0.47
Week 4 (n, %)	189 (38.9%)	1.46 (33.0%)	0.9	0.6-1.5	0.75
Week 12 (n, %)	189 (40.3%)	208 (50.1%)	0.8	0.5-1.2	0.28
Week 16 (n, %)	198 (48.3%)	174 (45.9%)	1.0	0.6-1.4	0.80

Poisson for rates generalized estimating equations analyses accounting for clustering at the household level
* Adjusted for age, sex, and number of household members earning an income.

Subgroup 2: Number of children aged 5-12 living in the household = >3

	Interventio n	Control	Rate Ratio *	95% CI	P value
Baseline (n, %)	67 (12.4%)	50 (10.6%)	2.5	0.7-8.1	0.14
Week 4 (n, %)	189 (38.9%)	1.46 (33.0%)	2.2	1.0-5.0	0.06
Week 12 (n, %)	189 (40.3%)	208 (50.1%)	0.7	0.4-1.4	0.34
Week 16 (n, %)	198 (48.3%)	174 (45.9%)	1.4	0.8-2.4	0.27

Poisson for rates generalized estimating equations analyses accounting for clustering at the household level
* Adjusted for age sex, and number of household members earning an income.