

Supporting information

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Table S1. Subgroup analysis by conflict: effect of the intervention on time spent collecting water, quantity of water collected, quality of water source, and quality of sanitation facility

Outcome	Conflict exposure	Control		Intervention		ITT	95% CI	
		N	Mean	N	Mean			
Time to collect water	No conflict	480	64.95	476	57.48	-4.5	(-23.0 to 14.0)	
	Conflict	252	81.63	104	80.14	2.0	(-32.9 to 37.0)	
Improved water source	No conflict	480	0.51	476	0.84	0.28	(0.17 to 0.38)	
	Conflict	252	0.28	104	0.83	0.53	(0.32 to 0.74)	
Quantity of water collected	No conflict	480	38.18	476	41.94	2.3	(-4.9 to 9.5)	
	Conflict	252	35.31	104	39.76	2.2	(-10.0 to 14.4)	
Improved sanitation facility	No conflict	480	0.21	476	0.47	0.25	(0.14 to 0.36)	
	Conflict	252	0.11	104	0.39	0.28	(0.04 to 0.52)	

ITT= intention-to-treat effect estimate. The model includes controls for randomization blocks based on province and number of villages per cluster. There were 121 clusters total. Time spent collecting water and total quantity of water collected were Winsorized at the 99th percentile. No conflict = village has not experienced armed conflict. Conflict = village has experienced armed conflict.

Table S2. Subgroup analysis by respondent education level: effect of the intervention on time spent collecting water, quantity of water collected, quality of water source, and quality of sanitation facility

Outcome	Education level	Control		Intervention		ITT	95% CI				
		N	Mean	N	Mean		(	to)		
Time to collect water	Less than primary educ.	489	72	367	62	-3	(	-21	to	15)
	Primary or more	243	68	213	60	-2	(	-22	to	18)
Improved water source	Less than primary educ.	489	0.45	367	0.83	0.31	(	0.18	to	0.43)
	Primary or more	243	0.40	213	0.84	0.40	(	0.28	to	0.51)
Quantity of water collected	Less than primary educ.	489	40	367	42	-1	(	-9	to	6)
	Primary or more	243	31	213	41	8	(	0	to	16)
Improved sanitation facility	Less than primary educ.	489	0.15	367	0.41	0.24	(	0.12	to	0.35)
	Primary or more	243	0.23	213	0.54	0.30	(	0.16	to	0.44)

ITT= intention-to-treat effect estimate. The model includes controls for randomization blocks based on province and number of villages per cluster. There were 121 clusters total. Time spent collecting water and total quantity of water collected were Winsorized at the 99th percentile. Education level corresponds to that of the respondent, typically the head woman of the household.

Table S3. Subgroup analysis by gender: effect of the intervention on time spent collecting water (minutes)

Water collector	Control		Intervention		ITT	95% CI
	N	Mean	N	Mean		
Head woman	732	33.1	580	29.2	-2.2	(-10.9 to 6.5)
Female children of head woman	640	129.7	510	128.0	12.1	(-24.9 to 49.1)

ITT= intention-to-treat effect estimate. The model includes controls for randomization blocks based on province and number of villages per cluster. There were 121 clusters total. Time spent collecting water was Winsorized at the 99th percentile. For female children of the head woman, time spent collecting water the previous day is the sum across all such persons

Table S4. Components of summary indices: effect of the intervention on indices of handwashing, sanitation practices, water storage, child health, school attendance, cost of water, water satisfaction, water quality & access, and water governance

Indices and index components	Control		Intervention		ITT	95% CI	
	N	Mean	N	Mean			
Handwashing practices index	732	0.00	580	0.61	0.48	(0.25 to 0.71)	
Washed hands with soap/ash since yesterday	732	0.64	580	0.80	0.07	(0.00 to 0.13)	
When necessary to wash hands with soap? (unprompted)							
After using toilet	732	0.62	580	0.82	0.17	(0.09 to 0.24)	
After washing baby's bottom/changing diaper	732	0.23	580	0.41	0.13	(0.06 to 0.21)	
After eating	732	0.59	580	0.62	0.08	(-0.01 to 0.17)	
Before preparing food	732	0.29	580	0.50	0.14	(0.07 to 0.21)	
Before eating	732	0.76	580	0.78	0.05	(-0.02 to 0.12)	
Before feeding / breastfeeding baby	732	0.20	580	0.41	0.16	(0.10 to 0.22)	
Before or after handling children	732	0.13	580	0.26	0.11	(0.04 to 0.17)	
After taking care of pets or farm animals	732	0.09	580	0.13	0.02	(-0.04 to 0.09)	
After coughing/sneezing	732	0.06	580	0.11	0.03	(-0.03 to 0.09)	
After coming back from the fields	732	0.27	580	0.40	0.08	(0.00 to 0.15)	
Owens handwashing device	732	0.05	580	0.19	0.14	(0.08 to 0.19)	
Sanitation practices index	732	0.00	580	0.48	0.28	(0.12 to 0.44)	
No open defecation	732	0.78	580	0.87	0.09	(0.03 to 0.15)	
Has anyone ever emptied latrine?	531	0.02	468	0.04	0.02	(0.00 to 0.04)	
If yes, how many times in last two weeks?	12	2.33	17	2.41	-2.04	(-4.23 to 0.14)	
Has anyone ever cleaned this latrine?	531	0.42	468	0.52	0.02	(-0.07 to 0.11)	
If yes, how many times in last two weeks?	218	4.71	242	5.34	0.87	(0.07 to 1.67)	
In last 18 months, any improvements to latrine?	563	0.16	493	0.23	0.07	(0.01 to 0.13)	
Safe feces disposal	706	0.61	562	0.70	0.02	(-0.03 to 0.08)	
No flies observed	732	0.48	580	0.59	0.02	(-0.06 to 0.10)	
No mosquitoes observed	732	0.37	580	0.47	0.02	(-0.06 to 0.10)	
Times/week living space cleaned	732	7.13	580	7.56	-0.04	(-0.58 to 0.51)	
Appropriate waste disposal	732	0.50	580	0.73	0.20	(0.12 to 0.28)	
Water storage practices index	732	0.00	580	-0.21	-0.11	(-0.28 to 0.05)	
Does this household own a pot for water storage?	732	0.90	580	0.83	-0.04	(-0.11 to 0.02)	
Is the water from the pot clean?	657	0.86	479	0.87	0.00	(-0.06 to 0.05)	
Is the water from the pot covered?	657	0.83	479	0.90	0.08	(0.03 to 0.13)	
Does the pot have a clean cup?	657	0.67	479	0.56	-0.08	(-0.17 to 0.02)	
Child health index	448	0.00	377	-0.11	-0.06	(-0.22 to 0.11)	
Diarrhea, children 10-59 months old, last two weeks	742	0.32	646	0.27	-0.02	(-0.11 to 0.05)	
Fever, children 10-59 months old, last two weeks	742	0.59	646	0.51	-0.04	(-0.10 to 0.03)	
Cough, children 10-59 months old, last two weeks	742	0.51	646	0.49	0.01	(-0.06 to 0.09)	
School attendance index	702	0.00	558	-0.02	-0.09	(-0.20 to 0.03)	
Proportion of children in school	702	0.43	558	0.39	-0.03	(-0.06 to 0.00)	
If in school, how many days last week?	506	4.61	387	5.02	0.05	(-0.20 to 0.30)	
Financial cost of water index	732	0.00	580	0.14	0.13	(-0.10 to 0.36)	
Does it cost money to use water point?	732	0.04	580	0.06	0.02	(-0.03 to 0.06)	
If yes, how much paid in last week? (Congolese Francs)	42	539	33	269	3.6	(-39.9 to 47.1)	
Water satisfaction index	732	0.00	580	0.65	0.64	(0.43 to 0.85)	
Satisfaction with water access (1=very unsatisfied; 5=very sat.)	732	2.91	580	3.84	0.89	(0.55 to 1.23)	
Percent of water points respondent is satisfied with	729	52.24	575	78.87	27.04	(18.90 to 35.18)	
Water quality & access index	183	0.00	145	0.23	0.13	(-0.18 to 0.44)	
Number water points in village	183	2.42	145	2.08	-0.09	(-0.53 to 0.34)	

Number functional water points in village	162	2.31	139	1.91	-0.28	(-0.67 to 0.11)
Number functional improved water points in village	183	0.23	145	0.46	0.19	(-0.02 to 0.40)
Negative of num. breakdowns in functional water points last 6 months	183	-2.06	145	-0.77	0.64	(-0.02 to 1.30)
Negative of breakdown length functional WPs, last 6mo (mo)	183	-3.66	145	-2.32	0.17	(-2.21 to 2.54)
Repair took less than a month (1) or more than a month(0)	83	0.61	46	0.62	0.06	(-0.13 to 0.24)
Mean water trips per HH in village	183	5.49	145	5.92	0.10	(-0.70 to 0.91)
Negative of mean distance water point to village center (min)	158	-22.30	132	-19.30	1.00	(-3.71 to 5.72)
Negative of mean time to fill (min)	183	-2.60	145	-1.62	0.97	(0.13 to 1.81)
Mean months per year water point is available	158	11.24	132	10.08	-1.02	(-1.73 to -0.32)
Proportion water points with excellent water quality	158	0.39	132	0.59	0.14	(0.05 to 0.24)
Water governance index	183	0.00	145	1.33	1.33	(1.12 to 1.54)
Presence group that reports to community about water mgmt	183	0.32	145	0.75	0.43	(0.31 to 0.55)
Presence WASH committee	183	0.27	145	0.95	0.68	(0.58 to 0.78)
Number members WASH committee	84	6.11	139	7.61	1.68	(0.96 to 2.39)
Ratio women to men, WASH committee	82	0.39	139	0.75	0.30	(0.14 to 0.45)
Presence water maintenance system	183	0.50	145	0.81	0.29	(0.17 to 0.41)
Negative of months since last visit by health zone official	35	-9.80	49	-10.88	-2.05	(-8.19 to 4.08)
Community is satisfied with health zone	183	0.51	145	0.72	0.21	(0.09 to 0.32)
Community is satisfied with health area	182	0.64	144	0.76	0.09	(-0.04 to 0.21)
Community is satisfied with national government	183	0.52	145	0.54	0.08	(-0.05 to 0.21)

ITT= intention-to-treat effect estimate. The model includes controls for randomization blocks based on province and number of villages per cluster. There were 121 clusters total. Indices are calculated by rescaling each variable in each index (e.g. handwashing) so that higher values imply better outcomes, then standardizing relative to the control group, following Kling et al. (2007). Effects on are in standard deviation units.