Figure A1 about here.

Table A1

DESCRIPTIVE STATISTICS

Variables	Obs	Mean	SD	Min	Max
Active Follow-up variables					
Cognitive function factor score	1794	0.000	1.413	-5.696	4.097
Temperature	1802	36.511	0.436	34	39.9
Positive Blood smear	1802	0.437	0.496	0	1
Weight	1802	28.61795	7.941081	13.9	56.6
Height	1802	132.135	12.6093	105	166
Weight for age z-score	1802	-1.424	0.988	-5.167	1.845
Height for age z-score	1802	3.999	0.345	2.834	5.270
Haemoglobin concentration	1802	12.045	1.391	6.6	16.4
P falciparum parasitaemia (parasites / μL)	1802	920.482	6427.123	0	183275
Clinical Malaria cases	1802	0.016	0.127	0	1
Asymptomatic Malaria	1802	0.421	0.493	0	1
Splenomegaly	1802	0.051	0.220	0	1
Anemia	1802	0.218	0.429	0	2
Helminth Infections	1802	0.003	0.057	0	1
Respiratory infections	1802	0.011	0.107	0	1
Passive Follow-up variables					
Clinical Malaria cases	275	0.487	0.500	0	1
Temperature	266	37.534	0.974	36	40.4
Helminth Infections cases	275	0.032	0.178	0	1
Respiratory infections cases	275	0.127	0.333	0	1
Academic School Outcomes					
School Delay	167	0.285	1.227	-3.630	4.079
Standardized Academic school Notes	320	0.000	0.988	-2.117	2.400
Interview variables (117 households, 227 children)					
Muslim	227	0.581	0.494	0	1
Bambara ethnic group	227	0.947	0.224	0	1
Childhood Past Convulsion	227	0.101	0.302	0	1
Childhood Past Hospitalization	225	0.062	0.242	0	1
Childhood Past Malnutrition	222	0.045	0.207	0	1
Mother alive	227	0.995	0.066	0	1
Father alive	227	0.885	0.319	0	1
Head of Household literate (can read or write)	117	0.051	0.221	0	1
Number of wife of the Head of Household	117	1.384	0.505	1	3
Number of Children in the Household	117	5.880	2.871	0	16
Number of persons who slept in the household the night before the interview	116	7.112	3.764	1	22
Number of children who slept in the household the night before the interview	117	4.119	2.930	0	19
Bednet in the household	117	0.512	0.501	0	1
Insecticide treated bednet in the household	117	0.444	0.499	0	1
Number of children who slept under net the day before the interview	117	0.461	1.038	0	5
Use of Insecticides	117	0.786	0.411	0	1

Table A2: Data on school characteristics

Grade	Number of Children Per classroom (%)	Children mean age	Children age SD	Cause of Teacher Absenteism	Teacher Absenteeism in days (% of total)
Grade 1	59 (25.99)	7.716	0.829	Total	20 (27.77)
				Strike	18 (25.00)
				Disease	1 (1.38)
				Other (familly, personnal)	1 (1.38)
Grade 3	65 (28.63)	9.905	1.265	Total	43 (59.72)
				Strike	18 (25.00)
				Disease	24 (33.33)
				Other (familly, personnal)	1 (1.38)
Grade 4 and 5	86 (37.89)	12.649	1.679	Total	6 (8.33)
				Strike	3 (4.16)
				Disease	2 (2.77)
				Other (familly, personnal)	1 (1.38)
Grade 6	17 (7.49)	13.808	2.105	Total	3 (4.16)
				Strike	3 (4.16)
Total	227 (100)	10.667	2.584	Total	72 (100)
				Strike	42 (58.33)
				Disease	27 (37.50)
				Other (familly, personnal)	3 (4.16)

Notes. - Number of children in Grade 4 is 16 (7.05%) and in Grade 5 is 70 (30.84%). Because of insufficient teachers, Grade 4 and 5 have been grouped in one classroom.

Table A3

ABSENTEEISM BY CAUSE

Cause of absenteeism	Number of lost days
Health	34.5 (75.82)
Confirmed Malaria Cases	12.5 (27.47)
Malaria Coinfections	2 (4.39)
Pregnancy	9 (19.78)
Respiratory Infections	2.5 (5.49)
Headache	1.5 (3.29)
Wounds/Burn/Whitlow	2 (4.39)
Helminth Infections	0.5 (1.09)
Dysentery/Food Poisoning	1 (2.19)
Caries	0.5 (1.09)
Sent to the health center by the teacher but not ill	2 (4.39)
Sent to the health center by the teacher but did not come	1 (2.19)
Exclusion for economic reason (subscription fees not payed)	3 (6.59)
Unknown	8 (17.58)
Total	45.5 (100)

Notes. - Percent of total lost days in parenthesis. Some children had malaria coinfections. Two children had malaria and respiratory infection (1 day lost) and one child had malaria and wound (1 day lost).

Table A4

HOUSEHOLD SOCIO-ECONOMIC CHARACTERISTICS

	All Households				Means	
	Scoring Factor	Means	SD	Impact on PCA score	Poorest Quintile	Richest Quintile
Variables used for Convenience Property Index:						
House characteristics:						
Floor is made of finish surface	0.267	0.230	0.423	0.631	0.043	0.583
Roof material is corrugated iron	0.282	0.863	0.345	0.817	0.478	1.000
Number of buildings	0.156	2.564	1.385	0.112	2.347	3.208
Number of rooms	0.232	4.358	2.328	0.099	3.565	5.833
Other place of residence	0.124	0.051	0.221	0.561	0.000	0.083
Household has Pit Toilet	0.111	0.452	0.499	0.222	0.260	0.541
Household owns at least one:						
Radio	0.272	0.641	0.481	0.565	0.217	0.875
Watch	0.261	0.512	0.501	0.520	0.130	0.750
Television	0.157	0.170	0.378	0.415	0.043	0.291
Bicycle	0.219	0.658	0.476	0.460	0.260	0.875
Motorcycle	0.379	0.555	0.499	0.759	0.086	0.916
Car	0.163	0.008	0.092	1.771	0.000	0.041
Mobile Phone	0.244	0.111	0.315	0.774	0.000	0.333
Cart	0.324	0.376	0.486	0.666	0.043	0.791
Plough	0.266	0.128	0.335	0.794	0.000	0.458
Donkey	0.345	0.230	0.423	0.815	0.000	0.666
Socio-economic Indices:						
Convenience Property Score	.	0.000	1.698	.	-2.253	2.399
Store-of-value Property (CFA Francs)	.	209350.44	386351.76	.	91268.1	370302.06
Productive Capital Property:						
Land Area property dedicated to agriculture (Hectares)		2.243	2.546	.	1.833	2.368
Electric Pump to irrigate		0.487	0.500	.	0 .289	0.652
Monetary Income (CFA Francs)	.	49966.52	78002.22	.	11224.64	82791.67
Savings (dummy variable)	.	0.165	0.275	.	0.086	0.208
Access to Informal credit (dummy variable)	.	0.854	0.271	.	0.898	0.833

Notes. - Except for the number of buildings and the number of rooms, each variable takes the value 1 if true, 0 otherwise. Scoring factor is the "weigth" assigned to each variable (normalized by its mean and standard deviation) in the linear combination of the variables that constitute the first principal component. Impact on PCA score is the impact of a change of an increase one unit for each variable (= Scoring factor / SD). The percentage of the covariance explained by the first principal component is 16%. The first eigenvalue is 2.89; the second eigenvalue is 2.30. Quintiles were defined on the basis of the Convenience Property PCA score. There was no formal access to credit.

Table A5

FACTORS ASSOCIATED WITH COGNITIVE FUNCTION FACTOR SCORE (TABLE 4 CONTROL VARIABLES)

Variables	Dependant variable is cognitive function PCA score				
	OLS models				
	(1)	(2)	(3)	(4)	(5)
Convenience Property Score	-0.004	-0.008	-0.008	-0.009	-0.008
	(0.024)	(0.024)	(0.024)	(0.024)	(0.024)
Monetary Income (CFA Francs)	0.000	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Store-of-value Property (CFA Francs)	-0.000	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Land Area property dedicated to agriculture (Hectares)	-0.026***	-0.024***	-0.024***	-0.024***	-0.024***
	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
Saving dummy	0.074	0.073	0.071	0.073	0.076
	(0.078)	(0.079)	(0.078)	(0.078)	(0.078)
Access to Informal credit dummy	0.560***	0.540***	0.548***	0.545***	0.545***
	(0.166)	(0.167)	(0.167)	(0.167)	(0.167)
Male	0.152**	0.143**	0.143**	0.140**	0.141**
	(0.067)	(0.068)	(0.068)	(0.068)	(0.068)
Muslim	0.078	0.095	0.090	0.090	0.090
	(0.066)	(0.066)	(0.066)	(0.066)	(0.066)
Bambara ethnic group	-0.003	-0.030	-0.027	-0.026	-0.028
	(0.129)	(0.128)	(0.128)	(0.129)	(0.129)
Age of the Head of Household	0.005	0.004	0.004	0.004	0.004
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Head of Household literate (can read or write)	0.409***	0.404***	0.420***	0.408***	0.416***
	(0.128)	(0.130)	(0.128)	(0.130)	(0.131)
Labour hours of the child	0.026*	0.028*	0.029*	0.030**	0.031**
	(0.015)	(0.015)	(0.015)	(0.015)	(0.015)
Time per week dedicated to do homeworks	0.472***	0.469***	0.468***	0.468***	0.470***
	(0.103)	(0.103)	(0.103)	(0.103)	(0.103)
Somebody can help the child to do homeworks (dummy)	0.132	0.137	0.138	0.134	0.132
	(0.091)	(0.092)	(0.092)	(0.092)	(0.092)
Father alive	0.007	0.006	0.003	-0.002	-0.002
	(0.097)	(0.097)	(0.097)	(0.097)	(0.097)
Mother Alive	0.313	0.275	0.303	0.279	0.289
	(0.261)	(0.261)	(0.261)	(0.262)	(0.261)
Grade 3 dummy	-0.889***	-0.879***	-0.877***	-0.868***	-0.872***
	(0.095)	(0.095)	(0.095)	(0.095)	(0.095)
Grade 4 and 5 dummy	-2.104***	-2.111***	-2.100***	-2.092***	-2.097***
	(0.157)	(0.158)	(0.158)	(0.159)	(0.158)
Grade 6 dummy	-3.393***	-3.383***	-3.379***	-3.361***	-3.374***
	(0.278)	(0.280)	(0.280)	(0.280)	(0.280)
Age 7	0.555***	0.529***	0.531***	0.509***	0.507***
	(0.177)	(0.193)	(0.190)	(0.193)	(0.194)
Age 8	1.106***	1.074***	1.089***	1.061***	1.059***
	(0.187)	(0.203)	(0.198)	(0.202)	(0.203)
Age 9	1.530***	1.486***	1.495***	1.469***	1.472***
	(0.223)	(0.237)	(0.233)	(0.236)	(0.237)
Age 10	1.818***	1.755***	1.764***	1.731***	1.738***
	(0.236)	(0.251)	(0.246)	(0.250)	(0.251)
Age 11	2.226***	2.152***	2.168***	2.128***	2.134***
	(0.274)	(0.288)	(0.284)	(0.287)	(0.287)
Age 12	2.818***	2.771***	2.775***	2.740***	2.748***
	(0.303)	(0.314)	(0.310)	(0.314)	(0.314)
Age 13	3.246***	3.175***	3.187***	3.147***	3.159***
	(0.307)	(0.320)	(0.316)	(0.319)	(0.319)
Age 14	3.734***	3.633***	3.643***	3.609***	3.615***
	(0.309)	(0.321)	(0.316)	(0.319)	(0.319)
Age 15	3.831***	3.727***	3.742***	3.678***	3.689***
	(0.383)	(0.396)	(0.391)	(0.394)	(0.394)
Age 16	4.417***	4.311***	4.326***	4.295***	4.305***
	(0.375)	(0.387)	(0.384)	(0.387)	(0.386)
Age 17	4.687***	4.543***	4.587***	4.497***	4.513***
	(0.462)	(0.470)	(0.466)	(0.465)	(0.467)

Notes. - Huber White standard errors are reported in parenthesis. Reference category for grade is Grade 1.
Reference category for age is Age 6.
 *** denotes statistical significance at the 1% level.

** at the 5% level
* at the 10% level.

ONLINE APPENDIX B

Table B1

FIXED-EFFECTS (WITHIN CHILD) ESTIMATIONS WITH OTHER DEPENDANT VARIABLES FOR COGNITIVE ACHIEVEMENT

	Fixed-effects models (within child)			
	Dependant variable is:			
Corresponding Regression Number and variables as in Table 5	Writting Skills	Visual Memory & Selective Attention	Vocabulary	Inductive Reasoning
Results for regression (1)				
Asymptomatic Malaria (active follow-up)	-0.139**	-0.032	-0.113*	-0.134***
	(0.057)	(0.036)	(0.058)	(0.048)
Lagged Asymptomatic Malaria (active follow-up)	-0.068	-0.016	-0.095*	-0.052
	(0.051)	(0.035)	(0.057)	(0.044)
Clinical Malaria (between two active follow-up or during active follow-up)	-0.453***	-0.170***	-0.245***	-0.302***
	(0.070)	(0.056)	(0.090)	(0.062)
Lagged Clinical Malaria (between two active follow-up or during active follow-up)	-0.241***	-0.034	-0.087	-0.080
	(0.061)	(0.039)	(0.083)	(0.049)
Results for regression (2)				
Monthly Geom Mean P. falciparum Parasitaemia (/1000)	-0.024**	-0.015*	-0.046***	-0.019*
	(0.010)	(0.008)	(0.016)	(0.010)
Lagged Monthly Geom Mean P. falciparum Parasitaemia (/1000)	-0.018*	-0.002	-0.029***	-0.036***
	(0.010)	(0.006)	(0.010)	(0.011)
Clinical Malaria (between two active follow-up or during active follow-up)	-0.451***	-0.169***	-0.245***	-0.293***
	(0.071)	(0.056)	(0.090)	(0.062)
Lagged Clinical Malaria (between two active follow-up or during active follow-up)	-0.222***	-0.025	-0.072	-0.073
	(0.062)	(0.041)	(0.082)	(0.050)
Results for regression (3)				
P. *falciparum* Parasitaemia tresholds (active follow-up)				
500	-0.132**	-0.060	-0.279***	-0.171***
	(0.057)	(0.042)	(0.065)	(0.056)
Lagged 500	-0.162***	-0.066*	-0.088	-0.119**
	(0.054)	(0.039)	(0.060)	(0.050)
Clinical Malaria (between two active follow-up or during active follow-up)	-0.434***	-0.161***	-0.239***	-0.288***
	(0.070)	(0.056)	(0.090)	(0.063)
Lagged Clinical Malaria (between two active follow-up or during active follow-up)	-0.227***	-0.032	-0.087	-0.080
	(0.061)	(0.039)	(0.081)	(0.049)
Results for regression (4)				
P. *falciparum* Parasitaemia tresholds (active follow-up)				
1000	-0.231***	-0.099*	-0.238***	-0.197***
	(0.065)	(0.053)	(0.084)	(0.073)
Lagged 1000	-0.211***	-0.037	-0.152**	-0.164***
	(0.063)	(0.043)	(0.066)	(0.062)
Clinical Malaria (between two active follow-up or during active follow-up)	-0.435***	-0.165***	-0.237***	-0.285***
	(0.070)	(0.056)	(0.091)	(0.062)
Lagged Clinical Malaria (between two active follow-up or during active follow-up)	-0.227***	-0.031	-0.078	-0.072
	(0.061)	(0.040)	(0.082)	(0.049)
Results for regression (5)				
P. *falciparum* Parasitaemia tresholds (active follow-up)				
1200	-0.204***	-0.116**	-0.313***	-0.187***
	(0.067)	(0.056)	(0.085)	(0.072)
Lagged 1200	-0.221***	-0.019	-0.176**	-0.167***
	(0.062)	(0.046)	(0.069)	(0.063)
Clinical Malaria (between two active follow-up or during active follow-up)	-0.442***	-0.167***	-0.232**	-0.287***
	(0.070)	(0.056)	(0.091)	(0.063)
Lagged Clinical Malaria (between two active follow-up or during active follow-up)	-0.237***	-0.032	-0.079	-0.074
	(0.062)	(0.040)	(0.081)	(0.049)

Notes. - Huber White standard errors are reported in parenthesis. Models used are the same fixed-effects models as in Table 5 but only the main coefficients of malaria measures (asymptomatic malaria, parasitaemia and clinical malaria) have been reported here with the corresponding regression numbers and variables.

*** denotes statistical significance at the 1% level.

** denotes statistical significance at the 5% level.

* denotes statistical significance at the 10% level.

Table B2

FACTORS ASSOCIATED WITH ACADEMIC PERFORMANCE AND SCHOOL DELAY

	Dependant variable is standardized academic school notes					Dependant variable is school attainment				
	Fixed-effects model (within child)	Random-effects models				OLS regressions				
Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Malaria Index										
Geom Mean *P. falciparum* Parasitemia (/1000)	-0.128*	-0.125***	-0.127***	-0.120***	-0.122***	-1.758**	-0.943	-1.494**	-0.770	-1.153*
	(0.074)	(0.041)	(0.041)	(0.043)	(0.043)	(0.855)	(0.697)	(0.636)	(0.732)	(0.655)
Probability of sleeping under mosquito net the night before the interview	.	0.040	0.042	0.141	0.153	.	0.828***	0.768***	0.636**	0.604**
		(0.219)	(0.217)	(0.232)	(0.232)		(0.244)	(0.252)	(0.292)	(0.283)
Health control										
Weight for Age z-score	.	0.068	.	0.089	.	.	0.440***	.	0.441***	.
		(0.089)		(0.092)			(0.106)		(0.110)	
Height for Age z-score	.	.	0.035	.	0.290	.	.	1.890***	.	1.846***
			(0.313)		(0.329)			(0.233)		(0.234)
Other Controls										
Age (years)	.	0.278***	0.263***	0.267***	0.273***	.	.	.	.	.
		(0.054)	(0.052)	(0.059)	(0.060)					
Male	.	.	.	-0.076	-0.132	.	.	.	0.462**	0.201
				(0.161)	(0.151)				(0.201)	(0.142)
Muslim	.	.	.	0.180	0.183	.	.	.	-0.020	-0.065
				(0.137)	(0.138)				(0.182)	(0.170)
Bambara	.	.	.	-0.280	-0.286	.	.	.	-0.090	-0.213
				(0.355)	(0.350)				(0.398)	(0.234)
Age of the head of household	.	.	.	0.006	0.005	.	.	.	-0.021***	-0.022***
				(0.008)	(0.008)				(0.007)	(0.006)
Head of Household literate (can read or write)	.	.	.	0.369	0.401	.	.	.	0.572*	0.665***
				(0.285)	(0.294)				(0.298)	(0.219)
Convenience Property score	.	.	.	-0.055	-0.048	.	.	.	0.044	0.072
				(0.041)	(0.040)				(0.049)	(0.048)
Time per week dedicated to do homeworks	.	.	.	0.509***	0.514***	.	.	.	0.081	0.239
				(0.164)	(0.168)				(0.234)	(0.211)
Father alive	.	.	.	-0.114	-0.149	.	.	.	0.204	-0.013
				(0.253)	(0.247)				(0.330)	(0.237)
Mother alive	.	.	.	0.512	0.514	.	.	.	0.576	0.678**
				(0.364)	(0.376)				(0.370)	(0.309)
Intercept	0.021	-2.658***	-2.738*	-3.072***	-4.305**	0.408***	0.669*	-8.117***	0.448	-8.432***
	(0.024)	(0.499)	(1.564)	(0.832)	(1.862)	(0.102)	(0.359)	(1.067)	(1.120)	(1.376)
Observations	320	320	320	320	320	167	167	167	167	167
Number of Children	167	167	167	167	167	167	167	167	167	167
R squared	0.038	0.177	0.173	0.261	0.260	0.036	0.213	0.336	0.295	0.429

Notes. - Huber White standard errors are reported in parenthesis. Results are not changed when standard errors are clustered at the household level (not presented here). *R* squared given for the fixed effects regression (1) is within *R* squared. For random effects models (2), (3), (4), (5), between *R* squared is presented. Other control variables are grade dummies.

*** denotes statistical significance at the 1% level.

** denotes statistical significance at the 5% level.

* denotes statistical significance at the 10% level.