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Supplemental Material

Predictors of Personal Exposure to Fine Particulate Matter, Black Carbon, and Carbon Monoxide among Pregnant Women in Rwanda: Baseline Data from the HAPIN Trial

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Table S1: BEST SUBSETS REGRESSION AND MODEL SELECTION FOR black carbon (BC) exposure among pregnant women at the HAPIN Rwanda Site, n=569

Variable name	R-squared values	Estimates	95% CI
Maternal age at baseline	0.207	-0.009	-0.02, 0.002
Food insecurity score	0.282	0.04	0.01, 0.06
Education: None, primary incomplete primary-secondary incomplete 2ndary complete - some college	Reference 0.339	Reference -0.50	Reference -0.64, -0.37
Occupation: commercial No Yes	Reference 0.356	Reference -0.46	Reference -0.59, -0.34
Occupation: household No Yes	Reference 0.360	Reference -0.41	Reference -0.65, -0.17
Cable TV No Yes	Reference 0.363	Reference -0.45	Reference -0.62, -0.28
Watch No Yes	Reference 0.373	Reference -0.30	Reference -0.41, -0.19
Bank account No Yes	Reference 0.375	Reference -0.44	Reference -0.55, -0.34
Mud wall No Yes	Reference 0.379	Reference 0.16	Reference 0.05, 0.26
Wood wall No Yes	Reference 0.383	Reference 0.22	Reference 0.12, 0.33
Secondhand tobacco exposure No Yes	Reference 0.384	Reference 0.03	Reference -0.08, 0.14
Lighting: Torch (battery) Kerosene Solar Electricity Other	Reference 0.384	 0.31 -0.017 -0.458 -0.06	 Reference 0.09, 0.52 0.160, 0.124 -0.603, -0.313 -0.26, 0.14
2nd lighting: None Candles Torch battery Kerosene Cell phone	Reference	 Reference 0.24 0.09 0.14 0.009	 Reference -0.39, 0.09 -0.07, 0.25 -0.12, 0.39 -0.13, 0.14

other		-0.29	-0.57, -0.0020
Primary fuel: Wood Charcoal	Reference 0.388	Reference -0.65	Reference -0.77, -0.54
Primary stove: Open/3-stone fire, mud/metal chula Biomass with chimney improved Other (ronderza, portable wood, other)	reference 0.388	Reference -0.63 -0.03	Reference -0.74, -0.52 -0.23, 0.16
Cook number of times per week	0.388	0.02	0.01, 0.03

Variables retained in the final Best Subsets consensus models (n=17)

Adjusted R-sq = 0.357

Mallow's CP = 2.269

BIC = -146.822

Table S2: BEST SUBSETS REGRESSION AND MODEL SELECTION FOR carbon monoxide (CO) exposure among pregnant women at the HAPIN Rwanda Site, n=716

Variable name	R-squared values	Estimates	95% CI
Occupation: agriculture			
No	Reference	Reference	Reference
Yes	0.289	-0.34	-0.45, -0.23
Occupation: household			
No	Reference	Reference	Reference
Yes	0.301	-0.41	-0.65, -0.17
Cable TV			
No	Reference	Reference	Reference
Yes	0.306	-0.45	-0.62, -0.28
Bank account			
No	Reference	Reference	Reference
Yes	0.322	-0.44	-0.55, -0.34
Mud floor			
No	Reference	Reference	Reference
Yes	0.325	0.45	0.35, 0.55
Wattle wall			
No	Reference	Reference	Reference
Yes	0.329	0.20	-0.0003, 0.41
Mud wall			
No	Reference	Reference	Reference
Yes	0.331	0.16	0.05, 0.26
Mudbrick wall			
No	Reference	Reference	Reference
Yes	0.333	-0.15	-0.25, -0.04
Concrete wall			
No	Reference	Reference	Reference
Yes	0.335	-0.37	-0.48, -0.25
Wood wall			
No	Reference	Reference	Reference
Yes	0.336	0.22	0.12, 0.33
Secondhand tobacco exposure			
No	Reference	Reference	Reference
Yes	0.337	0.03	-0.08, 0.14
Lighting:			
Torch (battery)	Reference	Reference	Reference
Kerosene lamp	0.337	0.306	0.09, 0.52
Solar light	0.337	-0.017	-0.16, 0.12
Electricity	0.338	-0.46	-0.60, -0.31
Other	0.338	0.06	0.26, 0.14
2nd lighting:			
Candles	Reference	Reference	Reference
Cell phone			

Kerosene	0.340	0.28	0.13, 0.45
Torch	0.339	0.51	0.23, 0.80
None	0.340	0.27	0.09, 0.45
Other	0.340	0.3	0.20, 0.52
	0.340	0.002	-0.27, 0.28
Primary fuel:			
Wood	Reference	Reference	Reference
Charcoal	0.340	-0.65	-0.77, -0.54
Primary stove:			
Open/3 stone fire, Mud/Metal Chula	Reference	Reference	Reference
Biomass stove/Plancha with Chimney		0.67	- 0.54, 0.77
Rondereza	0.340	-0.18	-0.29, -0.06
Other	0.340	0.05	-0.13, 0.24
Stove location:			
Inside main house	Reference	Reference	Reference
outside household	0.341	-0.82	-1.00, -0.63
Separate building	0.341	-0.80	-0.98, -0.63
Cook number of times per week	0.341	0.20	-2.06, 2.47

Variables retained in the final Best Subsets consensus models (n=19)

Adjusted R-sq = 0.311

Mallow's CP = 7.103

BIC = -118.551

Table S3: Personal PM_{2.5} exposure in µg/m³ by primary lighting source among pregnant women at the HAPIN Rwanda Site, n=717

	Light1_factor	Median	25th quantile	75th quantile
1	Torch (battery)	99.8	60.5	148.1
2	Kerosene lamp	115.5	90.7	197.3
3	Solar	93.4	61.0	156.4
4	Electricity	63.7	36.3	105.3
555	Other	98.5	54.2	138.9

This data is shown in Figure 1A.

HAPIN: Household Air Pollution Intervention Network; PM_{2.5}: particulate matter less than or equal to 2.5µm in diameter, measured in µg/m³

Table S4: Personal PM_{2.5} in µg/m³ by primary stove type among pregnant women at the HAPIN Rwanda Site, n=717

stove1_factor	Median	25th quantile	75th quantile
Open	113	71	167
Biomass w/ chimney improved	47.5	32.5	84.9
Rondereza	91.6	63.3	137
Portable (wood)	92.3	60	136
Other	155	134	176

This data is shown in Figure 1B

HAPIN: Household Air Pollution Intervention Network; PM_{2.5}: particulate matter less than or equal to 2.5µm in diameter, measured in µg/m³

Table S5: Personal PM_{2.5} exposure in µg/m³ by primary fuel type among pregnant women at the HAPIN Rwanda Site, n=717

	fuel1_factor	Median	25th quantile	75th quantile
2	Wood	104.0	65.7	156.7
3	Charcoal	47.3	32.5	83.5
555	Other	97.4	59.2	148.6

This data is shown in Figure 1C.

HAPIN: Household Air Pollution Intervention Network; PM_{2.5}: particulate matter less than or equal to 2.5µm in diameter, measured in µg/m³