

APPENDIX

Table 1: **Health Characteristics of e-waste and non-e-waste recyclers overtime.**

Variables	E-waste Recyclers					Non-E-waste Recyclers				
	<u>Baseline</u>	<u>Midline</u>	<u>End line</u>	<u>df</u>	<u>F</u>	<u>Baseline</u>	<u>Midline</u>	<u>End-line</u>	<u>df</u>	<u>F</u>
Systolic BP	123.06±12.36	119.85±10.75	119.62±14.12	2	3.56*	128.57±17.13	127.00±17.30	129.13±20.07	2	0.44
Diastolic BP	73.61±9.90	72.19±8.48	70.90±10.91	2	2.41	76.46±12.12	75.52±12.55	75.96±13.18	2	0.51
Heart Rate	73.69±11.50	73.44±9.97	73.82±10.74	2	0.08	74.38±13.21	69.36±10.86	73.62±12.93	2	3.39*
Pulse Pressure	49.46±11.23	47.67±11.22	48.71±12.17	2	1.56	52.11±9.97	51.48±10.80	53.18±10.89	2	0.17
Arterial Pressure	90.09±9.39	88.07±7.65	87.14±10.62	2	3.25*	93.83±13.17	92.68±13.38	93.68±14.96	2	0.54
PM _{2.5}	80.39±62.95	70.49±24.32	70.49±31.51	2	1.74	39.03±17.95	49.50±49.59	87.50±84.92	2	4.24*
Body Mass Index (BMI)	22.52±2.94	23.96±3.02	24.18±3.40	2	20.41***	23.82±3.33	24.14±3.52	24.11±3.84	2	0.76

Table 2: Relationship between E-waste exposure, Job Task and Daily Income Accrued on Micronutrient Intake: Random Effect Model

Variables	Calcium (Ca) β (95% CI)	Iron (Fe) β (95% CI)	Copper (Cu) β (95% CI)	Se (Selenium) β (95% CI)	Magnesium (Mg) β (95% CI)	Zinc (Zn) β (95% CI)
Location						
Madina Zongo	1					
E-waste	-0.05 (-0.20, 0.10)	0.15* (0.02, 0.29)	0.09(-0.13, 0.30)	-0.25(-0.58, 0.07)	-0.43** (-0.69, -0.17)	0.19** (0.06, 0.31)
Daily Income						
< GH ₵ 20	1					
GH ₵ 20-100	0.10 (-0.03, 0.24)	0.08(-0.04, 0.21)	0.05(-0.15, 0.24)	0.05(-0.24, 0.35)	0.07(-0.17, 0.31)	0.13* (0.02, 0.24)
GH ₵ 101-200	0.18(-0.03, 0.39)	0.11 (-0.08, 0.30)	0.12(-0.17, 0.43)	0.08(-0.37, 0.53)	0.11(-0.26, 0.48)	0.23** (0.06, 0.40)
>GH ₵200	0.24* (0.03, 0.45)	0.24* (0.05, 0.44)	0.17(-0.14, 0.47)	0.10(-0.37, 0.58)	0.01(-0.37, 0.38)	0.21* (0.04, 0.38)
Job Type						
Burner	1					
Dismantler	0.06 (-0.09, 0.20)	0.11(-0.02, 0.24)	0.09 (-0.11, 0.30)	0.27(-0.04, 0.59)	0.11(-0.14, 0.36)	0.03(-0.09, 0.14)
Sorter	0.07 (-0.20, 0.35)	0.15(-0.10, 0.40)	0.03 (-0.36, 0.43)	0.01(-0.58, 0.60)	-0.08(-0.55, 0.39)	0.06(0.16, 0.28)
Collector	0.07 (-0.13, 0.28)	0.08(-0.10, 0.27)	0.15(-0.14, 0.45)	0.47* (0.02, 0.92)	0.27(-0.10, 0.63)	0.10(-0.07, 0.26)

p-values notations: ***p<0.001 **p<0.01 *p<0.05

Table 3: Association Between PM_{2.5} Exposure and Blood Pressure Outcomes among E-waste and Non-E-waste Recyclers

BP outcomes	E-waste Recyclers β [95%CI:]	Non-E-waste Recyclers β [95%CI:]
Systolic BP	-0.019[-0.046, 0.007]	-0.036[-0.078, 0.005]
Diastolic BP	-0.007[-0.044, 0.030]	-0.048[-0.096, -0.0002]
Heart Rate	0.061* [0.007, 0.116]	-0.007[-0.066, 0.051]
Pulse Pressure	-0.038[-0.103, 0.027]	-0.017[-0.081, 0.047]
Arterial Pressure	-0.013[-0.041, 0.015]	-0.043* [-0.085, -0.001]

Model adjusted for age, smoking status, total calories consumed, dietary diversity scores and BMI

P-value notations: *p<0.05

Table 4: Effects of Dietary Micronutrient intake on the relationship between PM_{2.5} and BP among e-waste recyclers

Variables	Systolic Blood Pressure (SBP)	Diastolic Blood Pressure (DBP)	Pulse Pressure (PP)	Arterial Pressure (AP)	Heart Rate (HR)
	β [95% CI]	β [95% CI]	β [95% CI]	β [95% CI]	β [95% CI]
PM _{2.5}	-0.021 [-0.048, 0.005]	-0.010 [-0.046, 0.027]	-0.038 [-0.1022, -0.025]	-0.015 [-0.043, 0.013]	0.046 [-0.008, 0.099]
Ca	-0.017 [-0.049, 0.015]	0.005 [-0.038, 0.049]	-0.046 [-0.122, 0.031]	-0.005 [-0.039, 0.028]	-0.045 [-0.112, 0.018]
PM _{2.5}	-0.017 [-0.044, 0.011]	-0.011 [-0.047, 0.026]	-0.032 [-0.097, -0.033]	-0.014 [-0.043, 0.014]	0.048 [-0.005, 0.103]
Mg	0.003 [-0.011, 0.018]	0.012 [-0.008, 0.032]	-0.010 [-0.046, 0.025]	0.008 [-0.007, 0.023]	0.025 [0.004, 0.054]
PM _{2.5}	-0.020 [-0.046, 0.008]	-0.010 [-0.046, 0.030]	-0.036 [-0.099, 0.028]	-0.015 [-0.042, 0.013]	0.027 [-0.010, 0.064]
Fe	-0.040* [-0.075, -0.005]	-0.029 [-0.076, 0.019]	-0.045 [-0.129, 0.039]	-0.034 [-0.070, 0.003]	-0.029 [-0.086, 0.028]
PM _{2.5}	-0.025 [-0.074, 0.024]	-0.012 [-0.050, 0.026]	-0.036 [-0.082, 0.030]	-0.016 [-0.045, 0.013]	0.051 [-0.005, 0.106]
Se	0.030 [0.004, 0.056]	-0.008 [-0.026, 0.010]	0.013 [-0.018, 0.045]	-0.004 [-0.018, 0.010]	-0.006 [-0.032, 0.021]
PM _{2.5}	-0.020 [-0.047, -0.006]	-0.010 [-0.046, 0.026]	-0.045 [-0.100, 0.027]	-0.015 [-0.042, 0.013]	0.049 [-0.005, 0.103]
Cu	0.016 [-0.002, 0.035]	-0.004 [-0.029, 0.021]	0.044* [0.001, 0.088]	0.006 [-0.013, 0.025]	-0.016 [-0.052, 0.021]
PM _{2.5}	-0.019 [-0.046, -0.007]	-0.009 [-0.045, 0.028]	-0.036 [-0.100, 0.028]	-0.014 [-0.041, 0.014]	0.048 [0.011, 0.102]
Zn	-0.018 [-0.063, 0.026]	-0.041 [-0.102, 0.020]	0.012 [-0.095, 0.121]	-0.030 [-0.077, 0.016]	-0.005 [-0.085, 0.096]

Random effects adjustment was made for age, income, BMI, smoking status, marital status, biomass exposure, total calories consumed, dietary diversity scores in the model. $p < 0.025^*$, for which reason their values were boldened.