

1 **Household Hygiene Behaviors, Perceived Responsibility for Vector Control, and Vulnerability to Rat and Mosquito Sightings in Disadvantaged**
2 **Urban Communities**

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Supplementary Material IVa: Results of descriptive and univariable ordinal logistic regression assessing associations between mosquito sighting frequency and individual explanatory variables.

Characteristic	Frequency of mosquito sighting				Fisher's Exact Test	Univariable statistics	
	Daily (n=91)	Sometimes (n=22)	Rarely (n=15)	Never (n=8)			
Study community					0.084		
Nova Sussuarana	24 (26.4%)	5 (22.7%)	4 (26.7%)	0 (0.0%)		Ref	
Arenoso	25 (27.5%)	3 (13.6%)	4 (26.7%)	0 (0.0%)		0.78 (0.25, 2.39)	0.7
J. Santo Inácio	16 (17.6%)	8 (36.4%)	5 (33.3%)	5 (62.5%)		3.15 (1.20, 8.71)	0.022
Calabetão	26 (28.6%)	6 (27.3%)	2 (13.3%)	3 (37.5%)		1.18 (0.43, 3.36)	0.7
Household altitude	42.2 (8.1)	46.2 (8.0)	44.0 (9.5)	50.8 (4.4)	0.010	1.06 (1.02, 1.11)	0.007
Land surface temperature	31.7 (0.7)	32.1 (0.7)	31.9 (0.7)	32.4 (0.6)	0.007	2.09 (1.28, 3.57)	0.005
Age of HoH	49.0 (14.8)	53.9 (17.1)	58.4 (14.0)	53.3 (16.3)	0.010	1.03 (1.00, 1.05)	0.027
Sex of HoH					0.280		
Female	55 (60.4%)	17 (77.3%)	9 (60.0%)	7 (87.5%)		Ref	
Male	36 (39.6%)	5 (22.7%)	6 (40.0%)	1 (12.5%)		0.57 (0.26, 1.21)	0.2
*Highest level of education of HoH					0.521		
Never studied	6 (6.6%)	1 (4.8%)	0 (0.0%)	2 (25.0%)		Ref	
Primary education	32 (35.2%)	5 (23.8%)	5 (33.3%)	2 (25.0%)		0.63 (0.14, 3.40)	0.6
Secondary education	44 (48.4%)	14 (66.7%)	10 (66.7%)	4 (50.0%)		1.01 (0.24, 5.13)	>0.9
Bachelor degree	9 (9.9%)	1 (4.8%)	0 (0.0%)	0 (0.0%)		0.17 (0.01, 1.74)	0.2
*Occupation of HoH					0.531		

Formal worker	23 (26.4%)	2 (9.5%)	5 (33.3%)	1 (12.5%)	Ref	
Informal worker	23 (26.4%)	6 (28.6%)	3 (20.0%)	1 (12.5%)	1.11 (0.38, 3.34)	0.9
Retired	17 (19.5%)	8 (38.1%)	4 (26.7%)	2 (25.0%)	1.99 (0.72, 5.82)	0.2
Unemployed	24 (27.6%)	5 (23.8%)	3 (20.0%)	4 (50.0%)	1.43 (0.51, 4.23)	0.5
*Household per capita monthly income					0.243	
Less than 249 USD	75 (85.2%)	17 (81.0%)	10 (66.7%)	5 (71.4%)	Ref	
More than 249 USD	13 (14.8%)	4 (19.0%)	5 (33.3%)	2 (28.6%)	2.09 (0.86, 4.96)	0.10
Backyard used for gardening					0.032	
No	53 (58.2%)	9 (40.9%)	3 (20.0%)	4 (50.0%)	Ref	
Yes	38 (41.8%)	13 (59.1%)	12 (80.0%)	4 (50.0%)	2.48 (1.21, 5.21)	0.014
Means of waste storage before final disposal					0.862	
Open bin	21 (23.1%)	7 (31.8%)	4 (26.7%)	1 (12.5%)	Ref	
Closed bin	23 (25.3%)	7 (31.8%)	4 (26.7%)	2 (25.0%)	1.03 (0.40, 2.68)	>0.9
Open sack bag	16 (17.6%)	2 (9.1%)	4 (26.7%)	1 (12.5%)	0.88 (0.28, 2.65)	0.8
Closed sack bag	31 (34.1%)	6 (27.3%)	3 (20.0%)	4 (50.0%)	0.82 (0.32, 2.12)	0.7
*HH waste disposal practices					0.095	
Municipal pickup	46 (51.1%)	9 (40.9%)	6 (40.0%)	4 (50.0%)	Ref	
Community central bin	26 (28.9%)	11 (50.0%)	9 (60.0%)	4 (50.0%)	2.13 (1.02, 4.53)	0.047
Others	18 (20.0%)	2 (9.1%)	0 (0.0%)	0 (0.0%)	0.25 (0.04, 0.98)	0.079
*Waste type most difficult to manage					0.716	
Solid	27 (34.6%)	6 (30.0%)	7 (50.0%)	1 (14.3%)	Ref	
Glass	12 (15.4%)	6 (30.0%)	3 (21.4%)	1 (14.3%)	1.41 (0.51, 3.86)	0.5
Electronic	12 (15.4%)	2 (10.0%)	1 (7.1%)	1 (14.3%)	0.66 (0.16, 2.25)	0.5
Others	27 (34.6%)	6 (30.0%)	3 (21.4%)	4 (57.1%)	0.97 (0.39, 2.42)	>0.9
Perceived helplessness toward mosquito sightings					0.590	
No	75 (82.4%)	19 (86.4%)	14 (93.3%)	8 (100.0%)	Ref	
Yes	16 (17.6%)	3 (13.6%)	1 (6.7%)	0 (0.0%)	0.43 (0.12, 1.23)	0.14
*Prior participation in hygiene awareness programs					0.630	
No	49 (55.1%)	14 (63.6%)	10 (66.7%)	6 (75.0%)	Ref	
Yes	40 (44.9%)	8 (36.4%)	5 (33.3%)	2 (25.0%)	0.60 (0.28, 1.24)	0.2
Backyard hygiene					0.260	

conditions								
	Clean	37 (40.7%)	10 (45.5%)	8 (53.3%)	6 (75.0%)		Ref	
	Unclean	54 (59.3%)	12 (54.5%)	7 (46.7%)	2 (25.0%)	0.686	0.55 (0.27, 1.12)	0.10
Concern about backyard status								
	Always	71 (78.0%)	18 (81.8%)	14 (93.3%)	7 (87.5%)		Ref	
	Sometimes	20 (22.0%)	4 (18.2%)	1 (6.7%)	1 (12.5%)	0.005	0.52 (0.18, 1.32)	0.19
Net installation for mosquito control								
	Yes	54 (59.3%)	14 (63.6%)	6 (40.0%)	6 (75.0%)		Ref	
	No	37 (40.7%)	8 (36.4%)	9 (60.0%)	2 (25.0%)	0.721	3.69 (1.49, 9.06)	0.004
Stagnant water removal for mosquito control								
	Yes	8 (8.8%)	6 (27.3%)	2 (13.3%)	1 (12.5%)		Ref	
	No	83 (91.2%)	16 (72.7%)	13 (86.7%)	7 (87.5%)	0.272	1.99 (0.76, 5.02)	0.15
Perceived body responsible for rat control								
	Individual household	22 (24.2%)	3 (13.6%)	4 (26.7%)	3 (37.5%)		Ref	
	The community	27 (29.7%)	10 (45.5%)	7 (46.7%)	4 (50.0%)		1.51 (0.61, 3.91)	0.4
	The government	42 (46.2%)	9 (40.9%)	4 (26.7%)	1 (12.5%)	0.258	0.63 (0.24, 1.66)	0.3
*Solid waste present in the backyard								
	No	21 (24.1%)	2 (9.5%)	1 (6.7%)	2 (25.0%)		Ref	
	Yes	66 (75.9%)	19 (90.5%)	14 (93.3%)	6 (75.0%)		2.31 (0.86, 7.33)	0.12
Health awareness barriers to backyard cleanliness								
	No	86 (94.5%)	22 (100.0%)	15 (100.0%)	7 (87.5%)	0.4	Ref	
	Yes	5 (5.5%)	0 (0.0%)	0 (0.0%)	1 (12.5%)		2.43 (0.10, 31.4)	0.5
Lack of time as a barrier to backyard cleanliness								
	No	85 (93.4%)	17 (77.3%)	11 (73.3%)	8 (100.0%)	0.023	Ref	
	Yes	6 (6.6%)	5 (22.7%)	4 (26.7%)	0 (0.0%)		2.54 (0.95, 6.57)	0.056

12 ¹n (%); Mean (SD)

13 ²Kruskal-Wallis rank sum test

14 Abbreviations: CI = Confidence Interval, OR = Odds Ratio, HH=Household, HoH=Head of Household

15 *Variables containing missing data

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17 **Supplementary Material IVb: Final Model Selection - Mosquito sightings**

	Helpless after mosquito sighting	Neighborhood	Backyard hygiene conditions	Net installation for mosquito control	HH waste disposal practices	household per capita monthly income	Solid waste in backyard	Land surface temperature	Backyard used for gardening	AICc
Model 1 (selected)		+	+	+	+			+	+	231
Model 2		+	+	+	+		+	+	+	231.1
Model 3	+	+	+	+	+			+	+	231.6
Model 4	+	+	+	+	+		+	+	+	231.8
Model 5	+	+	+	+	+	+			+	231.8

18 HoH - Head of Household; HH - Household