Appendix

Geospatial Health #823

Bayesian conditional autoregressive model to assess spatial patterns of diarrhoea risk among children under the age of 5 years in Mbour, Senegal

Table A1. Socio-demographic characteristics of study population in the four stratified zones of Mbour.

Variable	Overall	UCA	PCA	NPA	SPA	P-value
	N= 761	N= 153	N= 322	N= 185	N= 101	
	n (%)	n (%)	n (%)	n (%)	n (%)	
Gender of the respondents						0.005
Female	711 (93.4)	144 (94.1)	301 (93.5)	165 (89.2)	101 (100)	
Male	50 (6.6)	9 (5.9)	21 (6.5)	20 (10.8)		
Age of the respondents in years						0.130
15-24	190 (25.0)	41 (26.8)	82 (25.5)	42 (22.79)	25 (24.7)	
25-30	232 (30.5)	54 (35.3)	104 (32.3)	43 (23.2)	31 (30.7)	
31-35	135 (17.7)	25 (16.3)	56 (17.49)	37 (20.0)	17 (16.8)	
36- 44	129 (16.9)	25 (16.3)	54 (16.8)	34 (18.4)	16 (15.8)	
More than 45	75 (9.9)	8 (5.2)	26 (8.1)	29 (15.7)	12 (11.9)	
Educational level						0.046
Never go to school	219 (28.8)	45 (29.4)	96 (29.8)	42 (22.7)	36 (35.6)	
Primary school	225 (29.6)	47 (30.7)	99 (30.7)	53 (28.6)	26 (25.7)	
Secondary education	177 (23.3)	38 (24.8)	80 (24.8)	41 (22.2)	18 (17.8)	
Koranic school	140 (18.4)	23 (15.0)	47 (14.6)	49 (26.5)	21 (20.8)	
Occupation of head of household						**<0.001**
Public service	17 (2.2)	4 (2.6)	5 (1.5)	7 (3.8)	1 (0.9)	
Private service	46 (6.0)	8 (5.2)	30 (9.3)	4 (2.2)	4 (3.9)	
Merchant	150 (19.7)	21 (13.7)	72 (22.4)	37 (20.0)	20 (19.8)	
Housewife	358 (47.0)	94 (61.4)	152 (47.2)	59 (31.9)	53 (52.5)	
Others (no employment, etc.)	190 (24.9)	26 (16.9)	63 (19.6)	78 (42.2)	23 (22.8)	
Wealth Index						**<0.001**
Poorer	213 (27.9)	28 (18.3)	85 (26.4)	67 (36.2)	33 (32.7)	
Middle	284 (37.3)	58 (37.9)	146 (45.3)	47 (25.4)	33 (32.7)	
Richer	264 (34.7)	67 (43.8)	91 (28.3)	71 (38.4)	35 (34.6)	

Child characteristic (n=1,083)						
Gender of the child						0.533
Female	507 (46.8)	109 (48.0)	198 (44.2)	132 (48.7)	60 (49.6)	
Male	576 (53.2)	118 (52.0)	250 (55.8)	139 (51.3)	69 (50.4)	
Age of the child						<0.039
0-11 months	209 (19.3)	48 (21.1)	101(22.5)	42 (15.5)	18 (13.1)	
12-24 months	420 (38.8)	87 (38.3)	177 (39.5)	98 (36.2)	58 (42.3)	
36-59 months	454 (41.9)	92 (40.5)	170 (37.9)	131 (48.3)	61 (44.5)	

Table A2. Characteristics of study population and WASH conditions in the four stratified zones of Mbour.

Variable	Overall	UCA	PCA	NPA	SPA	P-value
	N= 761	N= 153	N= 322	N= 185	N= 101	
	n (%)	n (%)	n (%)	n (%)	n (%)	
Drinking water source						**<0.001**
Private tap at home	444 (58.39	128 (83.7)	229 (71.1)	75 (40.5)	12 (11.9)	
Public tap	187 (24.6)	18 (11.8)	76 (23.6)	29 (15.7)	64 (63.4)	
well water	79 (10.4)	5 (3.3)	12 (3.7)	49 (26.5)	13 (12.8)	
Others	51 (6.7)	2 (1.3)	5 (1.5)	32 (17.3)	12 (11.9)	
Water storage						**<0.001**
Yes	621 (81.6)	141 (92.2)	284 (88.2)	112 (60.59	84 (83.2)	
No	140 (18.4)	12 (7.8)	38 (11.8)	73 (39.5)	17 (16.8)	
Container to store water at home						**<0.001**
Clay	43 (6.9)	4 (2.8)	30 (10.5)	5 (4.5)	4 (4.8)	
Plastic	420 (67.6)	96 (68.1)	198 (69.7)	67 (59.8)	59 (70.2)	
Metal	24 (3.9)	5 (3.5)	8 (2.8)	8 (7.1)	3 (3.6)	
At least one of the three	115 (18.5)	29 (20.6)	37 (13.0)	32 (28.6)	17 (20.2)	
Others	19 (3.0)	7 (4.9)	11 (3.9)	0	1 (1.2)	
Status of container during storage						**0.009**
Not available	6 (1.0)		1 (0.3)	5 (4.3)		
Covered	580 (92.8)	132 (93.6)	265 (93.3)	104 (89.7)	79 (94.0)	
Uncovered	39 (6.2)	9 (6.4)	18 (6.3)	7 (6.0)	5 (5.9)	
Water storage duration						**<0.001**
One day	509 (81.4)	119 (84.4)	240 (84.5)	84 (72.4)	66 (78.6)	
Two days	88 (14.1)	19 (13.5)	30 (10.5)	29 (25.0)	10 (11.9)	
Three days and more	28 (4.5)	3 (2.1)	14 (4.9)	3 (2.6)	8 (9.5)	
Container washing frequency						
Never	2 (0.3)			1 (0.9)	1 (1.2)	0.036
Daily	494 (79.0)	117 (82.9)	233 (82.0)	85 (73.3)	59 (70.2)	
Weekly	92 (14.7)	20 (14.2)	37 (13.0)	17 (14.7)	18 (21.4)	
Others	37 (5.9)	4 (2.8)	14 (4.9)	13 (11.2)	6 (7.1)	
Stored water treatment						**<0.001**
Treated	193 (31.1)	33 (23.4)	74 (26.1)	49 (43.7)	37 (44.0)	
No treated	425 (68.4)	108 (76.6)	210 (73.9)	60 (53.6)	47 (55.9)	
Not indicated	3 (0.5)			3 (2.7)		
Type of stored water treatment						**<0.001**
Javellisation	132 (68.4)	27 (81.8)	62 (83.8)	22 (44.9)	21 (56.8)	
Filtration	20 (10.4)	3 (9.1)	5 (6.8)	8 (16.3)	4 (10.8)	

						p-value
Others	41 (21.2)	3 (9.1)	7 (9.5)	19 (38.8)	12 (32.4)	
Toilet availability						**<0.001**
Yes	745 (97.9)	151 (98.7)	321 (99.7)	181 (97.8)	92 (91.1)	
No	16 (2.1)	2 (1.3)	1 (0.3)	4 (2.2)	9 (8.9)	
Type of toilet facilities						**<0.001**
Flush latrine	517 (69.4)	123 (81.5)	219 (68.29	137 (75.7)	38 (41.3)	
Open pit latrine with slab	183 (24.6)	27 (18.9)	79 (24.6)	36 (19.9)	41 (44.6)	
Traditional latrine	45 (6.0)	1 (0.7)	23 (7.2)	8 (4.4)	13 (14.1)	
Toilet shared with others households						**<0.001**
Yes	106 (14.2)	25 (16.6)	31 (9.7)	40 (22.1)	10 (10.9)	
No	639 (85.8)	126 (83.4)	290 (90.3)	141 (77.9)	82 (89.1)	
Domestic wastewater disposal						**<0.001**
Pit	27 (3.5)	16 (10.5)	10 (3.1)	1 (0.59		
Street	548 (72.0)	92 (60.1)	247 (76.7)	133 (71.9)	76 (75.2)	
Others	186 (24.4)	45 (29.4)	65 (20.29	51 (27.6)	25 (24.7)	
Storage of household solid waste						**<0.001**
Waste bins	74 (9.79	22 (14.49	22 (6.8)	22 (11.9)	8 (7.9)	
Open pail/basin	122 (16.0)	5 (3.39	35 (10.99	61 (32.9)	21 (20.8)	
Open bag	487 (63.9)	110 (71.9)	257 (79.8)	76 (41.1)	44 (43.5)	
Others	78 (10.29	16 (10.5)	8 (2.5)	26 (14.0)	28 (27.7)	
Handwashing						0.019
only water	90 (11.8)	8 (5.29	49 (15.2)	16 (8.6)	17 (16.8)	
water with soap	653 (85.8)	141 (92.2)	267 (82.9)	165 (89.2)	80 (79.2)	
others	8 (1.09	2 (1.3)	1 (0.3)	2 (1.1)	3 (2.9)	
Not indicated	10 (1.3)	2 (1.3)	5 (1.5)	2 (1.1)	1 (0.9)	