mics analysis

Ordinal

Table 1: Summary Table of Different Characteristics for Ordinal Model

Characteristic	**Overall**, N = 21,705	**Stunted**, N = 4,241	**Severely Stunted**, N = 1,801	**Pvalue**
Child Age				<0.001
<1 Year	4,201 (100%)	497 (12%)	221 (5.3%)	
1-3 Years	8,946 (100%)	1,982 (22%)	902 (10%)	
3-5 Years	8,558 (100%)	1,762 (21%)	678 (7.9%)	
Division				<0.001
Barishal	1,970 (100%)	396 (20%)	173 (8.8%)	
Chattogram	4,451 (100%)	848 (19%)	392 (8.8%)	
Dhaka	4,246 (100%)	784 (18%)	349 (8.2%)	
Khulna	3,051 (100%)	528 (17%)	129 (4.2%)	
Mymenshing	1,310 (100%)	309 (24%)	127 (9.7%)	
Rajshahi	2,304 (100%)	448 (19%)	157 (6.8%)	
Rangpur	2,546 (100%)	463 (18%)	250 (9.8%)	
Sylhet	1,827 (100%)	465 (25%)	224 (12%)	
Sex				0.6
Male	11,195(100%)	2,195 (20%)	948 (8.5%)	
Female	10,510(100%)	2,046 (19%)	853 (8.1%)	
Area				<0.001
Urban	3,941(100%)	688 (17%)	282 (7.2%)	
Rural	17,764(100%)	3,553 (20%)	1,519 (8.6%)	
Wealth Index				<0.001
Poorest	5,382 (100%)	1,384 (26%)	645 (12%)	
Second	4,578 (100%)	1,002 (22%)	409 (8.9%)	
Middle	4,144 (100%)	765 (18%)	292 (7.0%)	
Fourth	4,075 (100%)	659 (16%)	251 (6.2%)	
Richest	3,526 (100%)	431 (12%)	204 (5.8%)	
Education Level				<0.001
None	2,422 (100%)	648 (27%)	318 (13%)	
Primary	5,253 (100%)	1,207 (23%)	574 (11%)	
Secondary	10,706(100%)	1,940 (18%)	737 (6.9%)	
Higher	3,324 (100%)	446 (13%)	172 (5.2%)	
BMI	14.95 (14.03, 16.03)	14.84 (14.03, 15.86)	15.27 (14.27, 16.82)	<0.001

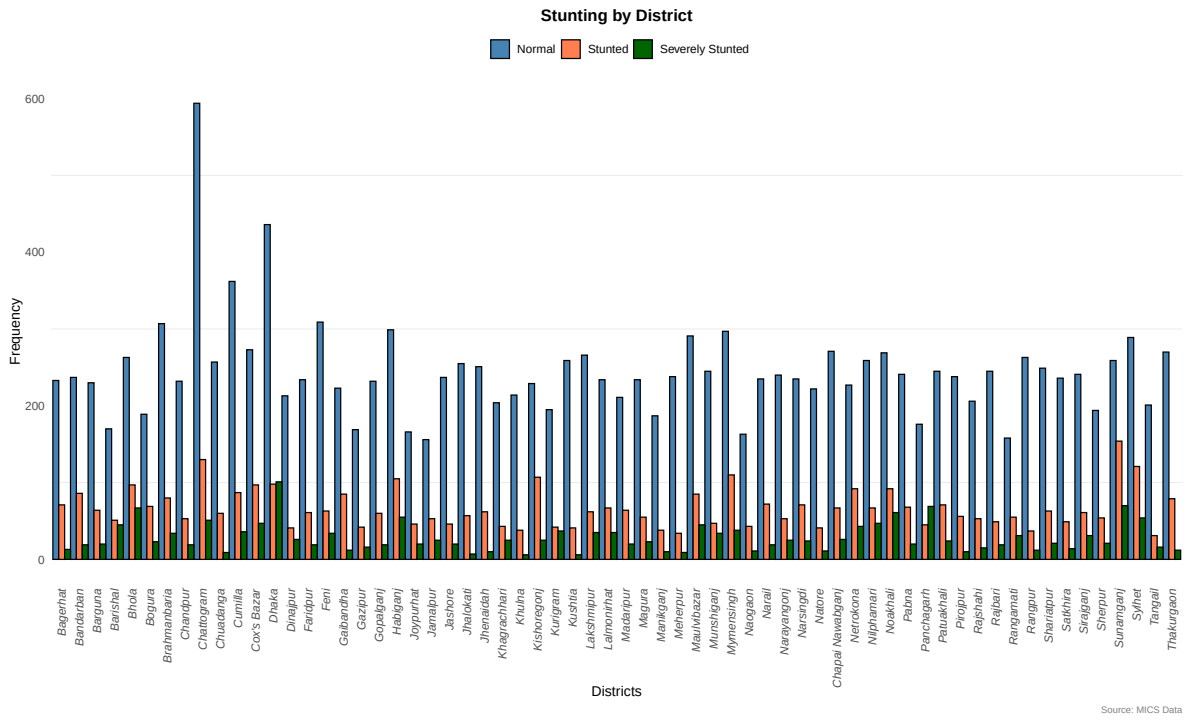

Figure 1: Distribution of Stunting Over Disitricts

Table 2: Odds Ratio and 95% CI of Different Variables for Ordinal Model

Variable	**Odds Ratio**	**Conf. Low**	**Conf. High**	**Pvalue**
Child Age (**ref: <1 Year**)				
1-3 Years	2.59	2.36	2.85	<0.01
3-5 Years	2.36	2.14	2.61	<0.01
Division (**ref: Barisal**)				
Chattogram	1.15	0.89	1.49	0.28
Dhaka	1.08	0.84	1.39	0.54
Khulna	0.83	0.63	1.08	0.16
Mymenshing	1.22	0.88	1.69	0.22
Rajshahi	1.02	0.77	1.34	0.91
Rangpur	1.05	0.80	1.38	0.74
Sylhet	1.77	1.29	2.44	<0.01
Place Of Residence (**ref: Urban**)				
Rural	0.94	0.86	1.03	0.21
Wealth Index (**ref: Poorest**)				
Second	0.80	0.73	0.87	<0.01
Middle	0.63	0.57	0.69	<0.01
Fourth	0.53	0.48	0.59	<0.01
Richest	0.35	0.31	0.40	<0.01
Education Level (**ref: None**)				
Primary	0.87	0.79	0.96	<0.01
Secondary	0.68	0.62	0.75	<0.01
Higher	0.58	0.51	0.66	<0.01
BMI	1.16	1.14	1.19	<0.01
Thresholds	**Estimates (log)**			
Normal|Stunted	3.38	2.95	3.82	<0.01
Stunted|Severely Stunted	4.91	4.48	5.33	<0.01
Random Effect	**Estimates**			
Districts(HH7A)	0.25			
ICC	0.02			

Table 3: Comparison of MOR Between Null and Covariate-Adjusted Ordinal Models

	Null Models[1]		**Covariate-Adjusted Models**	
Term	Estimates	95% CI	Estimates	95% CI
$\widehat{\text{MOR}}_{stunted}$	1.34	(1.27, 1.44)	1.24	(1.19, 1.31)

Null Models: This model does not include any covariates

Multinomial models

Table 4: Summary Table of Characteristics for Multinomial Model

Characteristic	**Sample** N=3,769	**Govt(%)** N=618	**Private(%)** N=2,110	**P-value**
Education Level				0.008
None	278	17.63	50.36	
Primary	918	16.99	54.79	
Secondary	1,959	15.82)	55.54	
Higher	614	16.78	61.73	
Area				<0.001
Urban	739	21.38	64.82	
Rural	3,030	15.18	53.83	
Wealth Index				<0.001
Poorest	883	18.23	48.13	
Second	782	15.35	48.08	
Middle	729	16.19	54.32	
Fourth	754	15.92	61.41	
Richest	621	15.94	72.46	
Division				<0.001
Barishal	382	17.54	53.14	
Chattogram	871	10.79	65.67	
Dhaka	687	17.76	66.67	
Khulna	568	18.49	41.02	
Mymenshing	199	29.15	45.73	
Rajshahi	403	19.85	55.83	
Rangpur	419	13.84	41.53	
Sylhet	240	14.17	64.17	

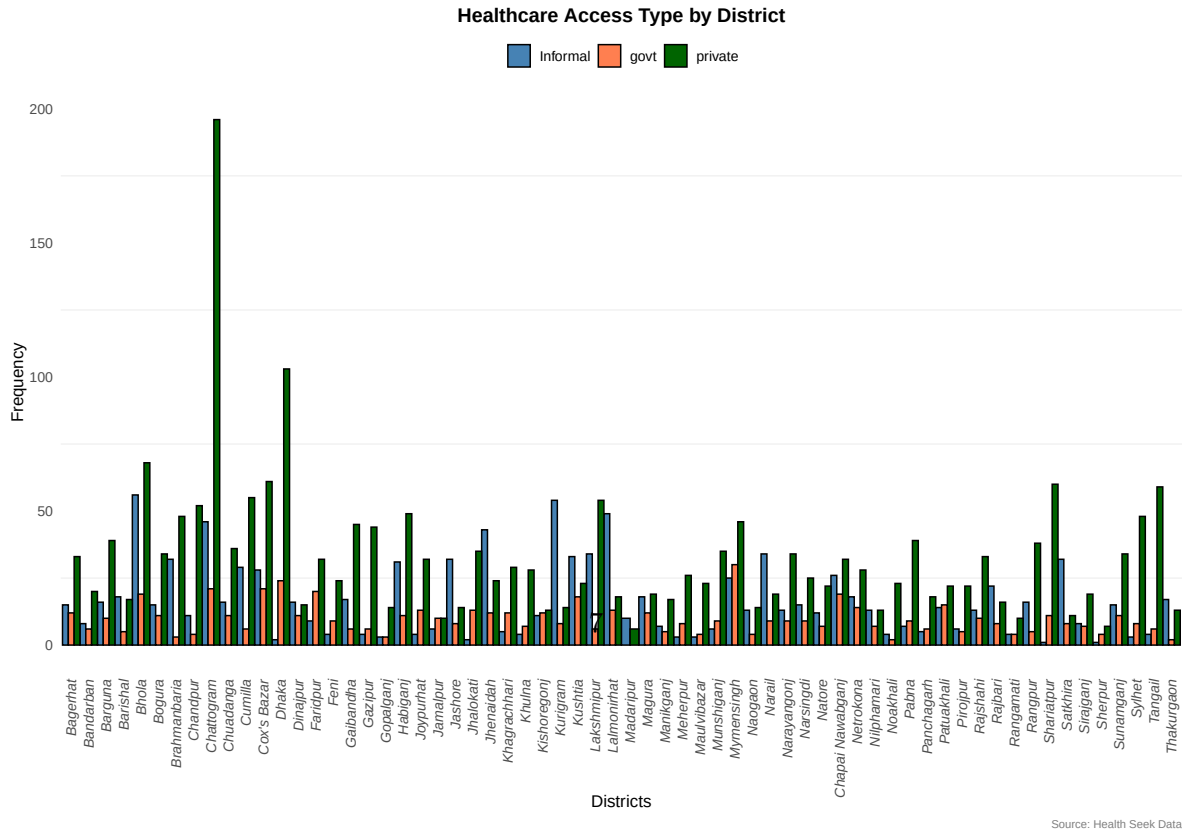

Table 5: Multinom Model Govt

Variable	Odds Ratio	Conf. Low	Conf. High	Pvalue
		Base(Informal)		
Intercept	1.48	0.87	2.53	0.15
Education Level (**ref: None**)				
Primary	1.13	0.72	1.77	0.59
Secondary	0.93	0.61	1.44	0.75
Higher	1.03	0.61	1.72	0.92
Place of Residence (**ref: Urban**)				
Rural	0.39	0.28	0.53	<0.01
Wealth Index (**ref: Poorest**)				
Second	0.74	0.54	1.02	0.07
Middle	0.95	0.67	1.33	0.75
Fourth	1.20	0.83	1.73	0.33
Richest	1.78	1.11	2.85	0.02
$\boldsymbol{\sigma}^2_{Districts}$	0.60			
		Private		
Intercept	2.59	1.63	4.13	<0.01
Education Level (**ref: None**)				
Primary	1.35	0.96	1.90	0.08
Secondary	1.12	0.80	1.55	0.51
Higher	1.23	0.83	1.82	0.3
Place of Residence ref: Urban				
Rural	0.52	0.40	0.68	<0.01
Wealth Index (**ref: Poorest**)				
Second	0.99	0.78	1.27	0.95
Middle	1.29	0.99	1.67	0.06
Fourth	1.79	1.35	2.37	<0.01
Richest	2.94	2.05	4.20	<0.01
$\boldsymbol{\sigma}^2_{Districts}$	0.88			

Table 6: Comparison of MOR Between Null Models and Covariate-Adjusted Models

	Null Models[2]		**Covariate-Adjusted Models**	
Term	Estimates	95% CI	Estimates	95% CI
$\widehat{\text{MOR}}_{Govt}$	2.18	(1.80, 2.65)	2.10	(1.73, 2.55)
$\widehat{\text{MOR}}_{Private}$	2.55	(2.10, 3.11)	2.45	(2.02, 2.96)

Null Models: This model does not include any covariates