

Supplementary file

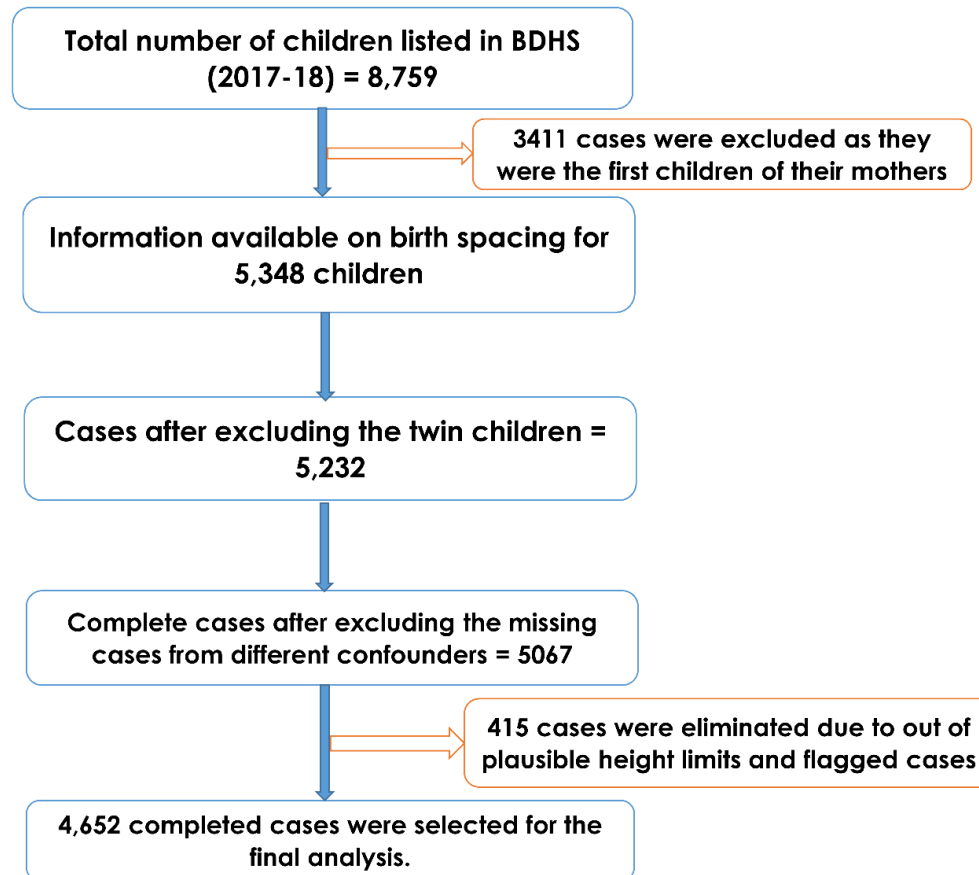


Figure S1: Flow chart displaying the steps to select the final sample for formal analysis.

Table S1: Frequency and percentage distribution of the selected variables.

Variables	Freq.	Percent
Division		
Barisal	482	10.36
Chittagong	791	17.00
Dhaka	622	13.37
Khulna	450	9.67
Mymensingh	560	12.04
Rajshahi	452	9.72
Rangpur	555	11.93
Sylhet	740	15.91
Place of residence		
Urban	1,522	32.72
Rural	3,130	67.28
Terminated pregnancy		
No	3,671	78.91
Yes	981	21.09
Father's education		
No education	880	18.92
Primary	1,722	37.02
Secondary	1,377	29.60
Higher	673	14.47
Employment status		
No	2,524	54.26
Yes	2,128	45.74
Sex		
Male	2,429	52.21
Female	2,223	47.79

Short birth spacing		
No	3,621	77.84
Yes	1,031	22.16
Women 3E		
<50%	1,814	38.99
50%-75%	1,443	31.02
>75%	1,395	29.99
Maternal age		
<20 years	98	2.11
20-34 years	3,979	85.53
>34 years	575	12.36
Body mass index (BMI)		
Underweight	630	13.54
Normal	1,981	42.58
Overweight	1,409	30.29
Obese	632	13.59
Maternal age at marriage		
<15 years	1,311	28.18
15-18 years	2,685	57.72
>18 years	656	14.10
Exposed to media		
No	1,854	39.85
Yes	2,798	60.15
Intimate partner violence		
No	3,772	81.08
Yes	880	18.92
Birth order		
2	2,469	53.07
3	1,267	27.24
4+	916	19.69

Stunting		
No	3,130	67.28
Yes	1,522	32.72
Wasting		
No	4,265	91.68
Yes	387	8.32
Underweight		
No	3,565	76.63
Yes	1,087	23.37
Multiple concurrent form of child malnutrition.		
No	3,682	79.15
Yes	970	20.85
At least one form of child malnutrition		
No	2759	59.31
Yes	1893	40.69

Table S2: Association of confounders with exposure (treated & controlled) (Pre-matching)

Variables	Short birth spacing (SBS)		P-value (chi-square test)
	No (control) (n=3621)	Yes (treated) (n=1031)	
Maternal age (years)			
<20	33 (0.9)	65 (6.3)	<0.001
20-34	3074 (84.9)	905 (87.8)	
>34	514 (14.2)	61 (5.9)	
Maternal employment			
No	1912 (52.8)	612 (59.4)	<0.001
Yes	1709 (47.2)	419 (40.6)	
Place of residence			
Urban	1205 (33.3)	317 (30.7)	0.1360
Rural	2416 (66.7)	714 (69.3)	
Sex of child			
Male	1886 (52.1)	543 (52.7)	0.768
Female	1735 (47.9)	488 (47.3)	
Division			
Barisal	396 (10.9)	86 (8.3)	<0.001
Chittagong	604 (16.7)	187 (18.1)	
Dhaka	508 (14.0)	114 (11.1)	
Khulna	385 (10.6)	65 (6.3)	
Mymensingh	437 (12.1)	123 (11.9)	
Rajshahi	376 (10.4)	76 (7.4)	
Rangpur	465 (12.8)	90 (8.7)	
Sylhet	450 (12.4)	290 (28.1)	
Fathers' education			
No education	670 (18.5)	210 (20.4)	0.023
Primary	1312 (36.2)	410 (39.8)	

Secondary	1103 (30.5)	274 (26.6)	
Higher	536 (14.8)	137 (13.3)	
Maternal age at marriage			
<15 years	1062 (29.3)	249 (24.2)	0.004
15-18 years	2052 (56.7)	633 (61.4)	
>18 years	507 (14.0)	149 (14.5)	
Exposed to media			
No	1393 (38.5)	461 (44.7)	<0.001
Yes	2228 (61.5)	570 (55.3)	
Intimate partner violence			
No	2946 (81.4)	826 (80.1)	0.393
Yes	675 (18.6)	205 (19.9)	
Terminated pregnancy			
No	2835 (78.3)	836 (81.1)	0.058
Yes	786 (21.7)	195 (18.9)	
Birth order			
2	1943 (53.7)	526 (51.0)	<0.001
3	1014 (28.0)	253 (24.5)	
≥ 4	664 (18.3)	252 (24.4)	
Women 3E index			
<50%	1328 (36.7)	486 (47.1)	<0.001
50%-75%	1141 (31.5)	302 (29.3)	
>75%	1152 (31.8)	243 (23.6)	
BMI			
Underweight	462 (12.8)	168 (16.3)	<0.001
Normal	1513 (41.8)	468 (45.4)	
Overweight	1121 (31.0)	288 (27.9)	
Obese	525 (14.5)	107 (10.4)	
Multiple concurrent			
No	2913 (80.4)	769 (74.6)	<0.001

Yes	708 (19.6)	262 (25.4)	
At least one form of child malnutrition			
No	2199 (79.70)	1422 (75.12)	<0.001
Yes	560 (20.30)	471 (24.88)	

Table S3: Pseudo R-square values with likelihood ratio (LR) test of goodness of fit obtained from logistic models for pre-match and post-match data.

	N	Pseudo R-square	LR test statistic	p-value
Pre match	4,652	0.07	303.86	<0.0001
Post-match	2,062	0.003	10.71	0.6344

Table S4: Logistic regression with interaction to see if the heterogeneous effects are significantly different for different groups.

	AOR (95% CI)
Interaction	Outcome: At least one forms of child malnutrition
SBS*Women 3E index	1.24 (0.86,1.78)
SBS*Age at marriage	1.35 (0.82,2.22)
Interaction	Outcome: Multiple concurrent forms of child malnutrition
SBS*Women 3E index	1.24 (0.81,1.89)
SBS*Age at marriage	1.26(0.67,2.38)

*P<0.05, **P<0.01