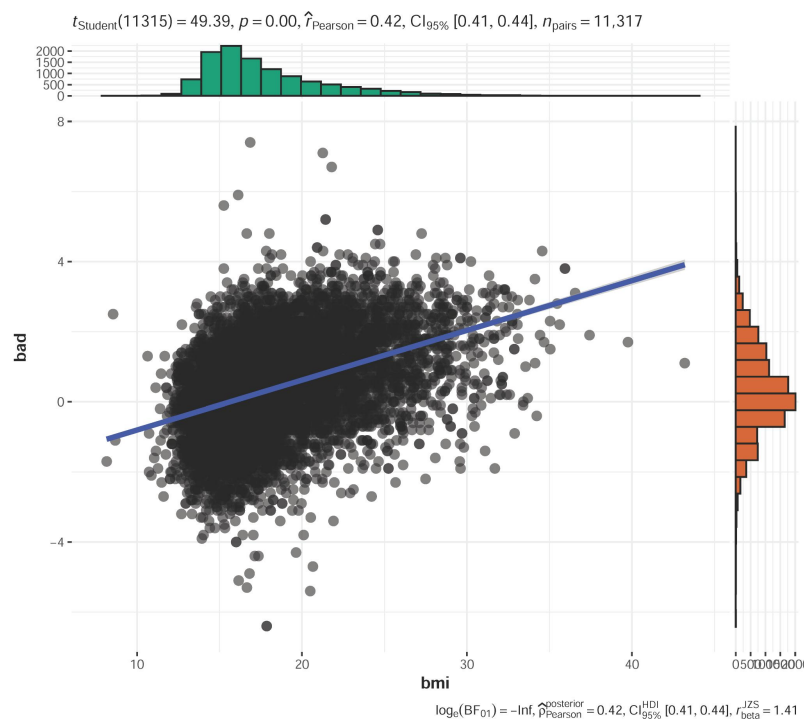
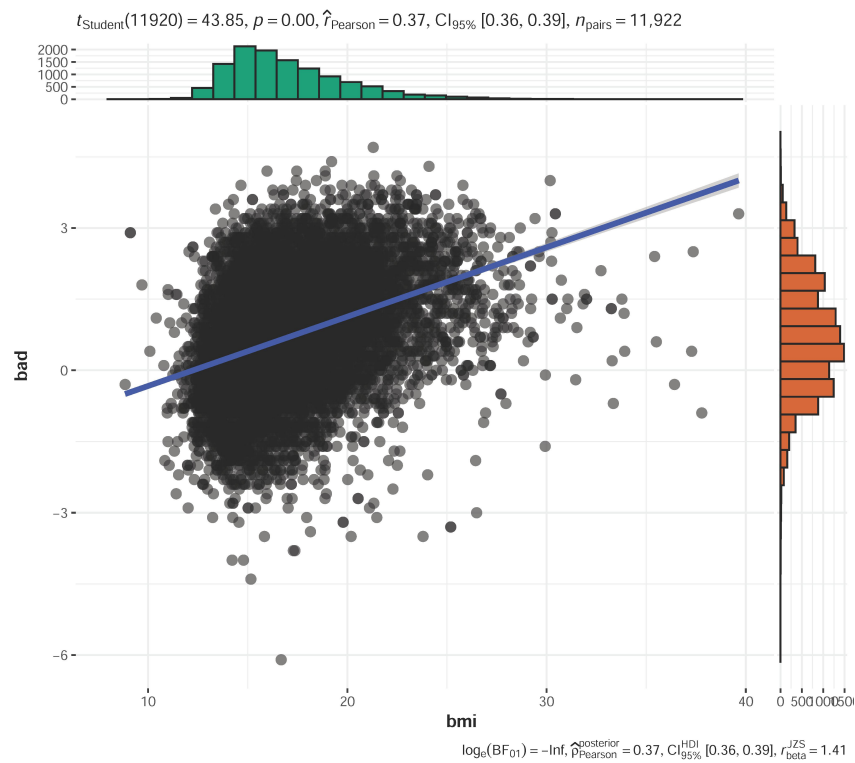


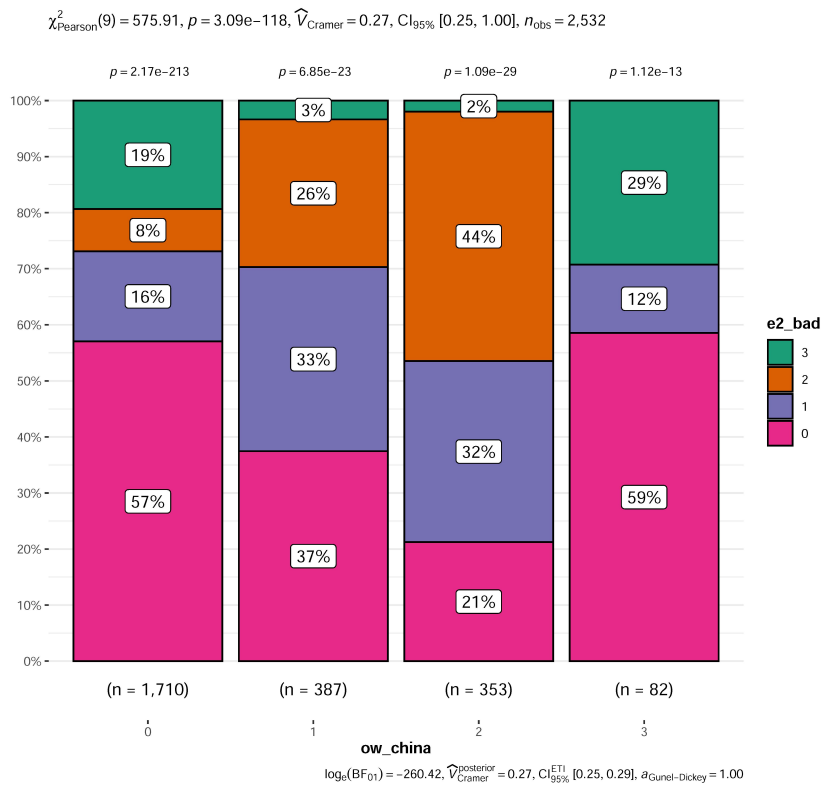
Supplementary Figure 1a. The correlation between BMI and BAD for boys.



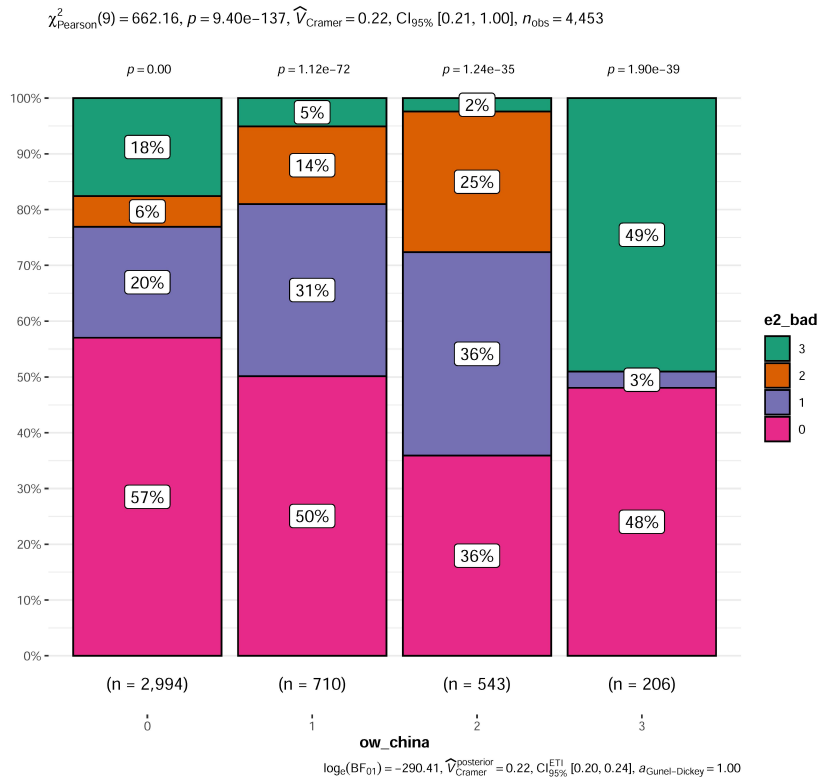
Supplementary Figure 1b. The correlation between BMI and BAD for girls.



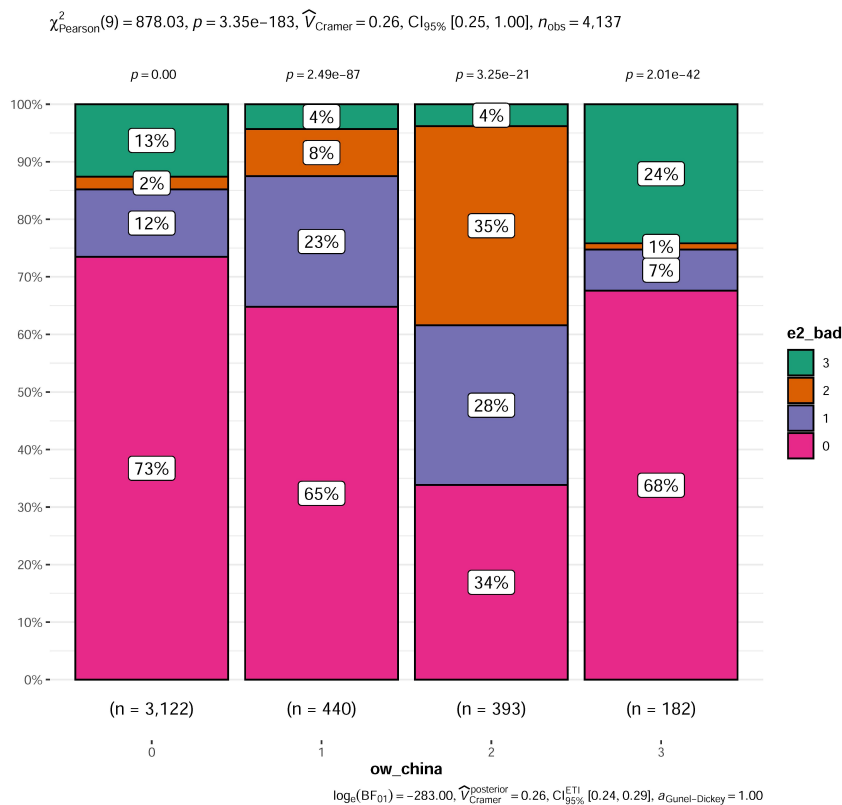
Supplementary Figure 2a. Under China criteria, the ratio of different nutritional status boys on BA change aged 9 to 11 years.



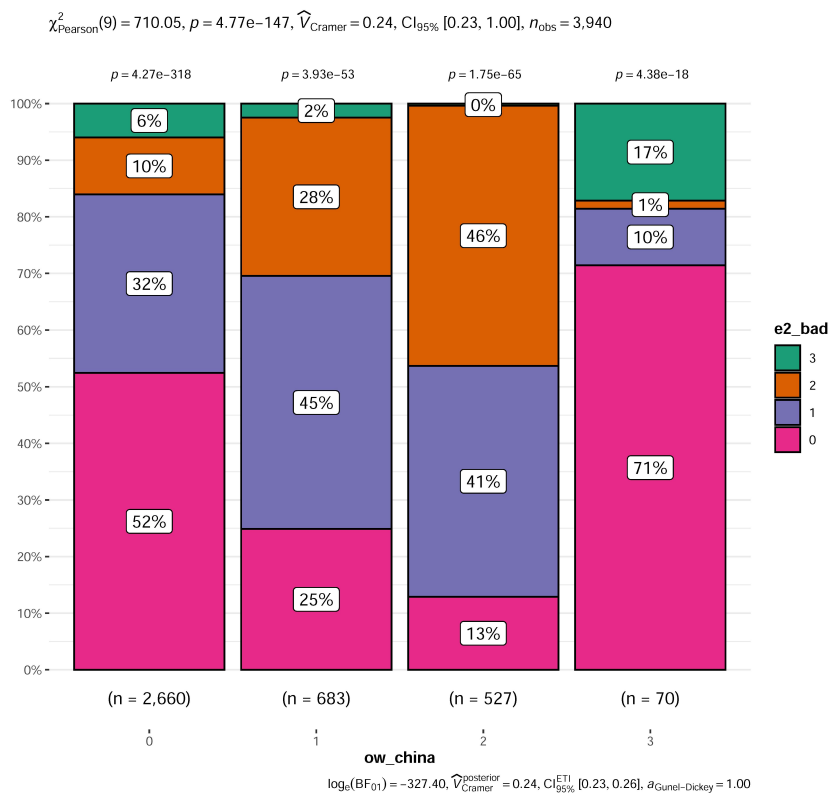
Supplementary Figure 2b. Under China criteria, the ratio of different nutritional status boys on BA change aged >11 years.



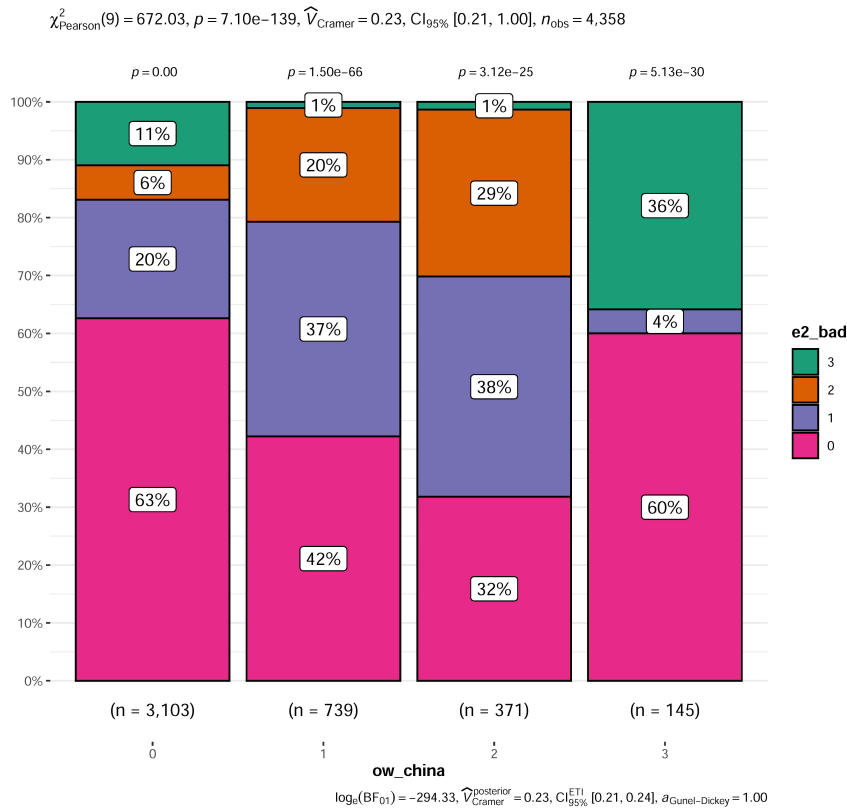
Supplementary Figure 2c. Under China criteria, the ratio of different nutritional status boys on BA change aged <9 years.



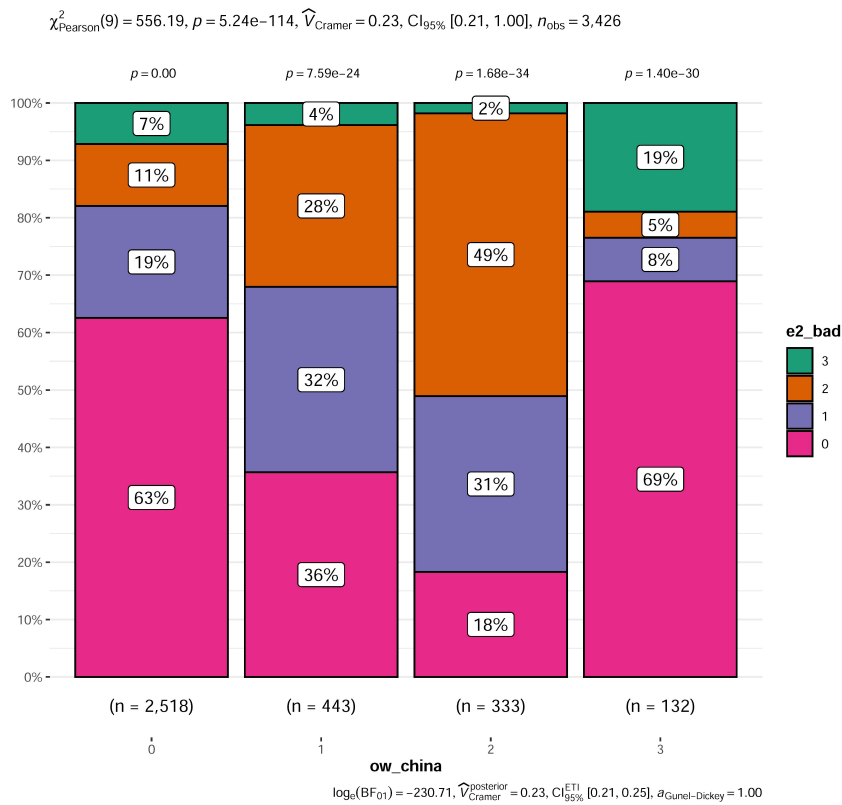
Supplementary Figure 2d. Under China criteria, the ratio of different nutritional status girls on BA change aged 8 to 10 years.



Supplementary Figure 2e. Under China criteria, the ratio of different nutritional status girls on BA change aged >10 years.



Supplementary Figure 2f. Under China criteria, the ratio of different nutritional status girls on BA change aged <8 years.



Supplementary Table 1. Risk factors for different children's BA development for boys under two different growth criteria.

Variables		Advanced BA			Significantly Advanced BA			Delayed BA		
		OR	95%CI	P	OR	95%CI	P	OR	95%CI	P
Unadjusted										
China criteria										
	Overweight	2.283	2.000 to 2.603	<0.001	4.133	3.449 to 4.946	<0.001	0.344	0.265 to 0.441	<0.001
	obesity	4.20	3.617 to 4.884	<0.001	14.626	12.315 to 17.396	<0.001	0.346	0.239 to 0.484	<0.001
	underweight	0.432	0.287 to 0.626	<0.001	0.102	0.017 to 0.318	<0.001	2.492	2.033 to 3.046	<0.001
WHO criteria										
	Overweight	2.595	2.289 to 2.940	<0.001	4.58	3.835 to 5.470	<0.001	0.385	0.304 to 0.481	<0.001
	obesity	4.43	3.831 to 5.129	<0.001	15.91	13.406 to 18.914	<0.001	0.309	0.214 to 0.432	<0.001
	underweight	0.507	0.304 to 0.798	0.006				3.221	2.539 to 4.080	<0.001
Age to and gender to adjusted										
China criteria										
	Overweight	2.137	1.869 to 2.441	<0.001	3.846	3.203 to 4.612	<0.001	0.317	0.243 to 0.407	<0.001
	obesity	3.972	3.414 to 4.622	<0.001	14.201	11.948 to 16.902	<0.001	0.313	0.216 to 0.439	<0.001
	underweight	0.44	0.292 to 0.639	<0.001	0.103	0.017 to 0.324	<0.001	2.417	1.966 to 2.964	<0.001
WHO criteria										
	Overweight	2.351	2.070 to 2.669	<0.001	4.109	3.431 to 4.917	<0.001	0.34	0.268 to 0.426	<0.001
	obesity	4.061	3.505 to 4.707	<0.001	15.142	12.744 to 18.018	<0.001	0.27	0.187 to 0.378	<0.001
	underweight	0.404	0.241 to 0.639	<0.001				2.482	1.944 to 3.164	<0.001

Abbreviations: BA, bone age; OR, odds ratio; 95% CI, 95% confidence interval; WHO, World Health Organization. P values were calculated after adjusting for age of children and sex.

Supplementary Table 2. Risk factors for different children's BA development for girls under two different growth criteria.

Variables	Advanced BA			Significantly Advanced BA			Delayed BA		
	OR	95%CI	P	OR	95%CI	P	OR	95%CI	P
Unadjusted									
China criteria									
Overweight	2.822	2.507 to 3.178	<0.001	4.881	4.231 to 5.631	<0.001	0.475	0.339 to 0.647	<0.001
obesity	4.64	3.944 to 5.468	<0.001	14.074	11.880 to 16.715	<0.001	0.381	0.206 to 0.642	<0.001
underweight	0.252	0.159 to 0.380	<0.001	0.208	0.088 to 0.410	<0.001	2.824	2.173 to 3.642	<0.001
WHO criteria									
Overweight	3.206	2.845 to 3.616	<0.001	6.30	5.489 to 7.226	<0.001	0.433	0.296 to 0.610	<0.001
obesity	4.47	3.650 to 5.490	<0.001	13.72	11.190 to 16.890	<0.001	0.394	0.177 to 0.754	<0.001
underweight	0.424	0.290 to 0.601	<0.001	0.252	0.113 to 0.478	<0.001	3.65	2.822 to 4.694	<0.001
Age to and gender to adjusted									
China criteria									
Overweight	2.808	2.494 to 3.163	<0.001	5.032	4.357 to 5.812	<0.001	0.461	0.329 to 0.628	<0.001
obesity	4.632	3.938 to 5.460	<0.001	14.209	11.984 to 16.889	<0.001	0.371	0.201 to 0.626	<0.001
underweight	0.25	0.161 to 0.383	<0.001	0.203	0.086 to 0.400	<0.001	2.867	2.201 to 3.707	<0.001
WHO criteria									
Overweight	3.186	2.825 to 3.593	<0.001	6.6	5.743 to 7.590	<0.001	0.417	0.286 to 0.589	<0.001
obesity	4.439	3.625 to 5.454	<0.001	14.122	11.503 to 17.409	<0.001	0.37	0.166 to 0.708	0.006
underweight	0.415	0.284 to 0.589	<0.001	0.272	0.123 to 0.518	<0.001	3.246	2.501 to 4.187	<0.001

Abbreviations: BA, bone age; OR, odds ratio; 95% CI, 95% confidence interval; WHO, World Health Organization. P values were calculated after adjusting for age of children and sex.