

Results for: The impact of bodyweight on life satisfaction among school-aged children: Are the mechanisms gender-based?

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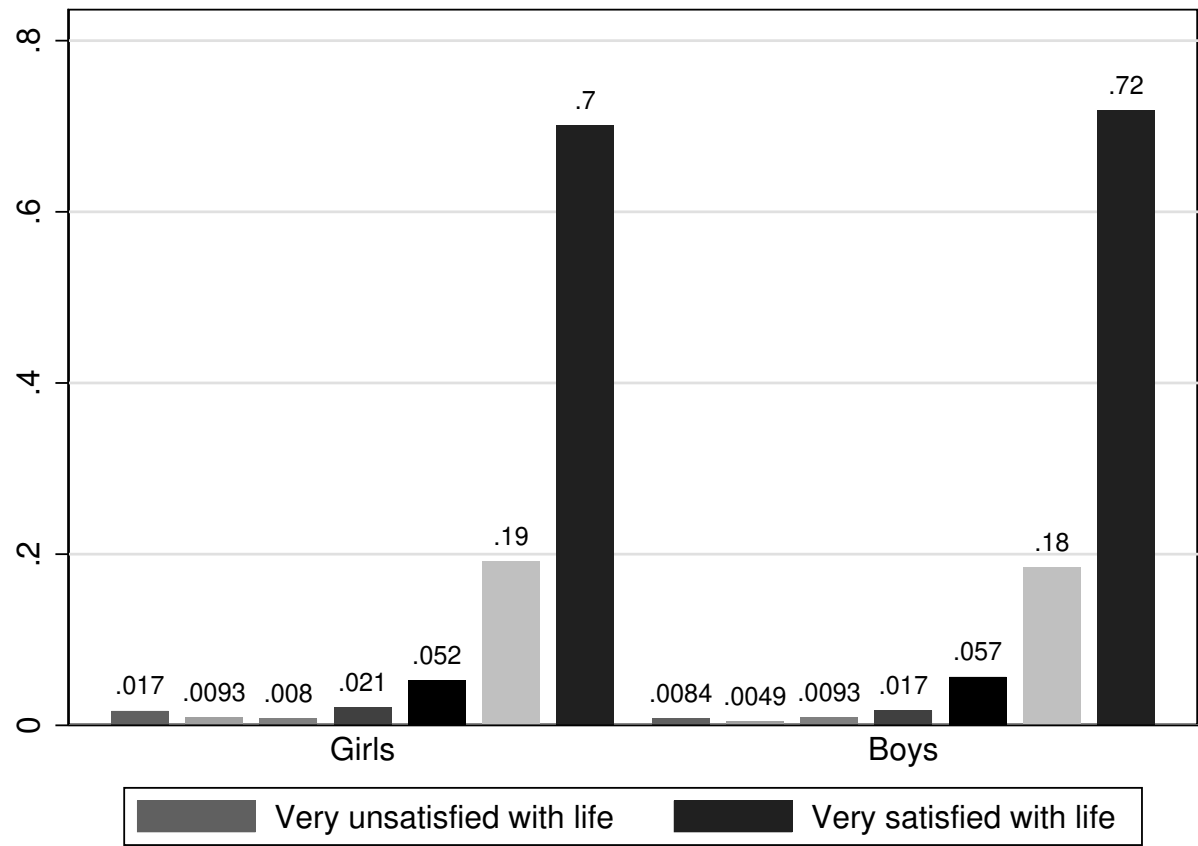
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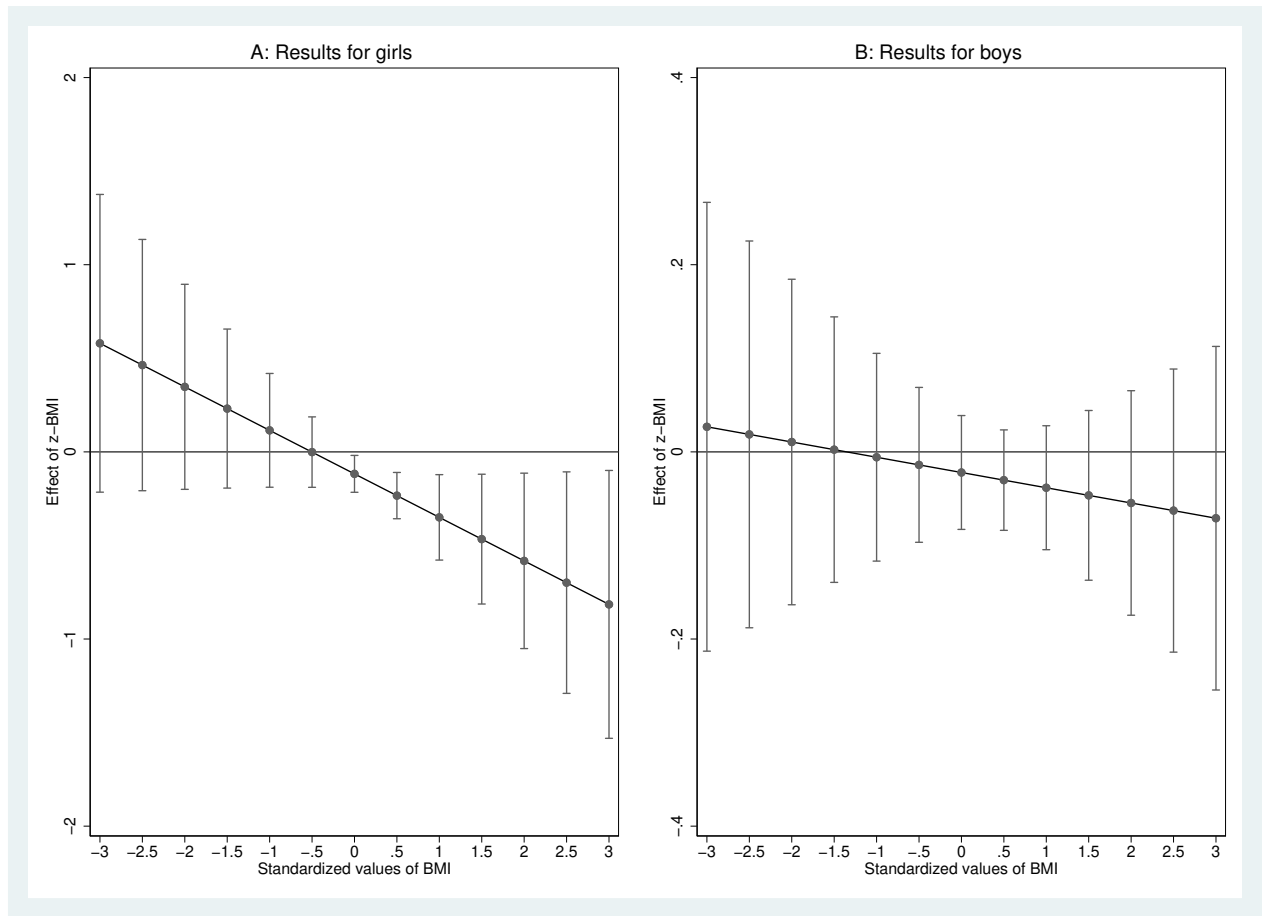
Figures

Figure 1: Distribution of LS for girls and boys.



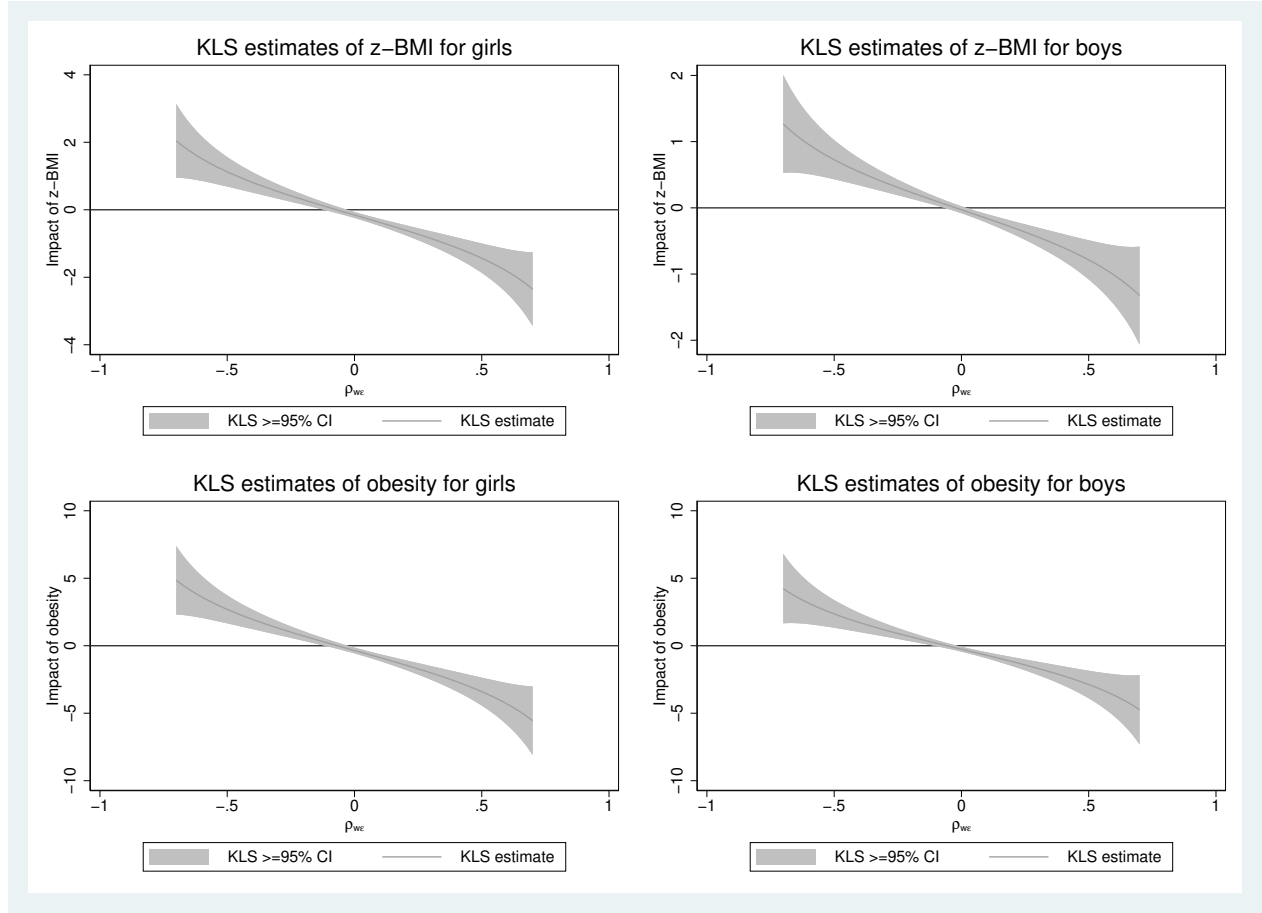
Notes: Own elaboration based on ELPI 2017 and the sample used in the main regression.

Figure 2: Non-linear relationship between bodyweight and life satisfaction: 95% CI



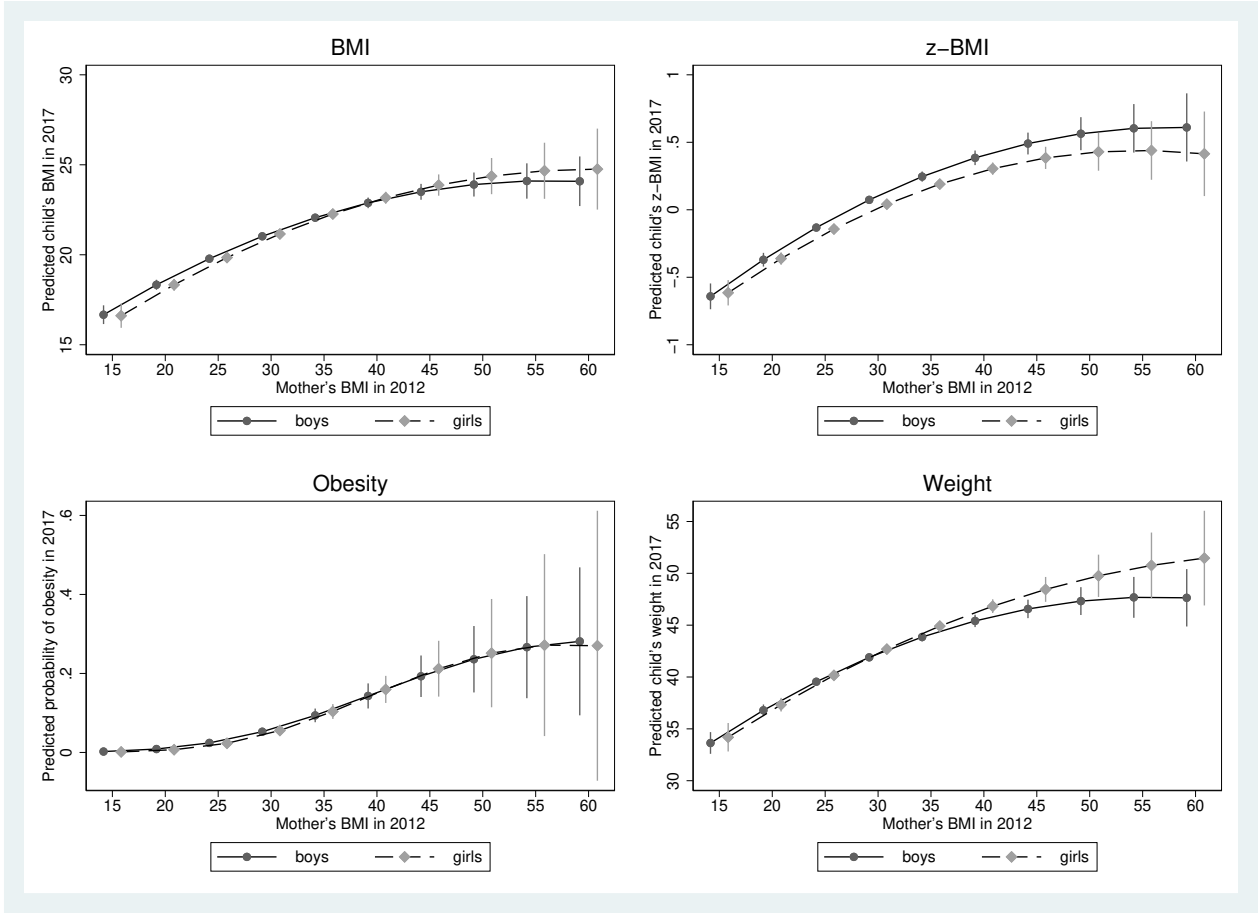
Notes: Each graph shows the 95% interval OLS-estimates of the impact of z-BMI on LS using a quadratic specification and the same controls as in [2](#).

Figure 3: Kinky least squares estimates for z-BMI and obesity: 95% CI



Notes: The KLS approach corrects the bias of the OLS estimator analytically assuming the degree of endogeneity: $\rho_{w,\epsilon}$. The asymptotically conservative CIs are obtained as the union of the CIs over the considered grid. The estimates are obtained using **kinkyreg** command in Stata. We control also for the same controls as in Table 2.

Figure 4: Relationship between children's bodyweight and lagged mothers' BMI: 95% CI



Notes: Each graph shows the conditional predicted values of BMI, z-BMI, weight (controlling for height) and obesity. The predicted values for obesity are obtained using a Probit model. We use quadratic specifications and control for the same controls as in Table 2.

Tables

Table 1: Summary statistics

	Girls			Boys		
	Mean	SD	N	Mean	SD	N
Children covariates:						
Life satisfaction	6.46	1.13	2256	6.54	0.96	2262
Weight	46.44	11.69	2256	45.27	11.34	2262
Height	146.99	8.21	2256	145.72	8.26	2262
Child's BMI	21.29	4.13	2256	21.13	4.06	2262
Child's z-BMI	-0.04	0.52	2256	-0.01	0.75	2262
Obese	0.05	0.21	2256	0.05	0.22	2262
Child's age in months	133.74	7.80	2256	133.98	7.70	2262
Number of older siblings	0.67	0.82	2256	0.70	0.82	2262
Number of younger siblings	0.54	0.69	2256	0.57	0.71	2262
Household covariates:						
Father in the house	0.58	0.49	2256	0.58	0.49	2262
ln(Household income)	13.41	1.37	2256	13.43	1.51	2262
Household size	4.48	1.52	2256	4.52	1.46	2262
Number of meals with family	2.49	0.81	2256	2.54	0.78	2262
Mother's covariates:						
Education (in years)	11.78	3.21	2256	11.83	3.21	2262
Age (in years)	37.42	6.96	2256	37.64	7.04	2262
Household head	0.44	0.50	2256	0.45	0.50	2262
Married	0.40	0.49	2256	0.41	0.49	2262
Cohabiting	0.26	0.44	2256	0.26	0.44	2262
Separated/divorce	0.09	0.29	2256	0.10	0.30	2262
Single	0.24	0.43	2256	0.22	0.42	2262
Widowed	0.01	0.11	2256	0.01	0.07	2262
Depression in 2017	0.29	0.45	2256	0.27	0.44	2262
Post-partum depression	0.10	0.30	2256	0.10	0.30	2262
Smoked during pregnancy	0.09	0.29	2256	0.10	0.30	2262
Drunk during pregnancy	0.07	0.26	2256	0.07	0.26	2262
Used drugs during pregnancy	0.01	0.08	2256	0.01	0.10	2262
Month of breastfeeding	14.89	11.74	2256	15.11	11.57	2262
Instrument:						
Mother's BMI in 2012	28.46	5.40	1899	28.13	5.31	1889
Mediators:						
BI satisfaction	2.52	0.78	2256	2.48	0.77	2260
Bullying score	15.45	4.01	2256	15.32	3.94	2260
Comorbidities	0.13	0.33	2256	0.15	0.35	2262
N	4518					

Notes: Own elaboration based on ELPI 2017 and the sample used in the main regression.

Table 2: Bodyweight and mediator variables: OLS specifications

	All			Girls			Boys		
	(1) BIS	(2) Bullying	(3) Bad health	(4) BIS	(5) Bullying	(6) Bad health	(7) BIS	(8) Bullying	(9) Bad health
Panel A									
z-BMI	-0.110*** (0.016)	0.156** (0.064)	0.024*** (0.006)	-0.192*** (0.036)	0.407** (0.153)	0.045*** (0.010)	-0.068*** (0.020)	0.031 (0.134)	0.013 (0.009)
N	4,516	4,516	4,518	2,256	2,256	2,256	2,260	2,260	2,262
R2	0.028	0.021	0.012	0.043	0.042	0.013	0.019	0.005	0.013
Panel B									
Obese	-0.298*** (0.053)	1.038*** (0.293)	0.040** (0.015)	-0.273*** (0.075)	1.107*** (0.294)	0.042** (0.017)	-0.335*** (0.067)	1.075* (0.601)	0.040 (0.036)
N	4,516	4,516	4,518	2,256	2,256	2,256	2,260	2,260	2,262
R2	0.026	0.023	0.010	0.032	0.043	0.009	0.023	0.008	0.013
Panel C									
Weight	-0.010*** (0.001)	0.023*** (0.004)	0.002*** (0.000)	-0.011*** (0.002)	0.027*** (0.008)	0.003*** (0.001)	-0.008*** (0.002)	0.020 (0.012)	0.002** (0.001)
Height	0.008*** (0.002)	-0.025*** (0.007)	-0.002** (0.001)	0.008** (0.003)	-0.031** (0.012)	-0.002 (0.001)	0.007*** (0.002)	-0.025*** (0.007)	-0.001 (0.001)
N	4,516	4,516	4,518	2,256	2,256	2,256	2,260	2,260	2,262
R2	0.031	0.023	0.013	0.044	0.042	0.012	0.021	0.006	0.014

Notes: Clustered standard errors at spatial-unit level in parenthesis. Child's controls include: age in months, age squared, older siblings and younger siblings. Household's controls: region, logarithm of monthly household income, whether the child lives with biological father, household size and meals. Mother's controls: schooling, age, household head, depression, months of breastfeeding, post-partum depression, risky behavior during pregnancy, and marital status. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 3: Life satisfaction and bodyweight among children: OLS specifications

	Girls					Boys				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Panel A										
z-BMI	-0.155*** (0.034)	-0.087** (0.033)	-0.134*** (0.036)	-0.150*** (0.033)	-0.080** (0.033)	-0.029 (0.023)	-0.008 (0.026)	-0.027 (0.023)	-0.028 (0.023)	-0.009 (0.025)
BIS		0.354*** (0.026)			0.302*** (0.028)		0.294*** (0.035)			0.253*** (0.034)
Bullying			-0.052*** (0.010)		-0.035*** (0.010)			-0.046*** (0.007)		-0.035*** (0.007)
Bad health				-0.108* (0.060)	-0.062 (0.051)				-0.089 (0.057)	-0.075 (0.058)
N	2,256	2,256	2,256	2,256	2,256	2,262	2,260	2,260	2,262	2,260
R2	0.017	0.074	0.049	0.018	0.087	0.007	0.061	0.042	0.008	0.080
% Reduction in bodyweight coefficient		44	14	3	48		72	8	4	69
Panel B										
Obese	-0.353*** (0.100)	-0.255*** (0.083)	-0.296** (0.100)	-0.348*** (0.100)	-0.228** (0.087)	-0.258 (0.148)	-0.161 (0.144)	-0.209 (0.140)	-0.254 (0.149)	-0.134 (0.136)
BIS		0.357*** (0.025)			0.305*** (0.028)		0.291*** (0.035)			0.251*** (0.034)
Bullying			-0.052*** (0.010)		-0.035*** (0.010)			-0.046*** (0.007)		-0.035*** (0.006)
Bad health				-0.118* (0.062)	-0.066 (0.052)				-0.087 (0.057)	-0.074 (0.057)
N	2,256	2,256	2,256	2,256	2,256	2,262	2,260	2,260	2,262	2,260
R2	0.017	0.075	0.049	0.018	0.088	0.010	0.062	0.044	0.010	0.081
% Reduction in bodyweight coefficient		28	16	1	35		38	19	1	48
Panel C										
Weight	-0.009*** (0.002)	-0.005** (0.002)	-0.008*** (0.002)	-0.009*** (0.002)	-0.004** (0.002)	-0.008** (0.003)	-0.006* (0.003)	-0.007** (0.003)	-0.008** (0.003)	-0.005 (0.003)
Height	0.004 (0.004)	0.001 (0.004)	0.002 (0.004)	0.003 (0.004)	0.000 (0.004)	0.010*** (0.003)	0.008** (0.003)	0.009** (0.003)	0.010*** (0.003)	0.007** (0.003)
BIS		0.354*** (0.026)			0.301*** (0.028)		0.290*** (0.035)			0.249*** (0.034)
Bullying			-0.052*** (0.010)		-0.035*** (0.010)			-0.046*** (0.007)		-0.035*** (0.007)
Bad Health				-0.108 (0.061)	-0.062 (0.052)				-0.081 (0.058)	-0.070 (0.058)
N	2,256	2,256	2,256	2,256	2,256	2,262	2,260	2,260	2,262	2,260
R2	0.017	0.074	0.050	0.018	0.087	0.011	0.063	0.045	0.012	0.082
% Reduction in bodyweight coefficient		45	15	3	51		29	12	2	36

Notes: Clustered standard errors at spatial-unit level in parenthesis. The control variables are the same as those in Table 2. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 4: Association between children's LS and mother's BMI

	Girls		Boys	
	(1)	(2)	(3)	(4)
Lagged mother's BMI	-0.005 (0.004)	-0.006 (0.004)	-0.011* (0.006)	-0.010* (0.005)
Child's z-BMI	-0.147*** (0.042)		-0.014 (0.036)	
Obese		-0.393*** (0.100)		-0.119 (0.162)
N	1,899	1,899	1,889	1,889

Notes: Clustered standard errors at spatial-unit level in parenthesis. The control variables are the same as those in Table 2. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 5: Balance of covariates between non-obese and obese mother

	Girls			Boys		
	Non-Obese	Obese	Difference	Non-Obese	Obese	Difference
Child's age in months	133.786	133.772	0.014	134.015	133.756	0.259
Number of older siblings	0.644	0.790	-0.146***	0.706	0.781	-0.074*
Number of younger siblings	0.539	0.477	0.062*	0.548	0.540	0.009
Father in the house	0.579	0.609	-0.030	0.576	0.632	-0.056**
ln(Household income)	13.412	13.333	0.080	13.471	13.328	0.144*
Household size	4.441	4.565	-0.125*	4.518	4.550	-0.032
Number of meals with family	2.474	2.543	-0.069*	2.520	2.572	-0.051
Mother's education (in years)	12.062	11.011	1.050***	12.069	11.108	0.962***
Mother's age	37.316	38.221	-0.905***	37.687	38.428	-0.742**
Household head	0.430	0.441	-0.011	0.436	0.439	-0.003
Married	0.399	0.410	-0.011	0.414	0.405	0.009
Cohabiting	0.255	0.270	-0.014	0.255	0.299	-0.044**
Separated/divorce	0.087	0.097	-0.010	0.105	0.103	0.002
Single	0.242	0.215	0.027	0.219	0.188	0.031
Widowed	0.016	0.008	0.008	0.007	0.005	0.001
Mother's depression	0.278	0.341	-0.063***	0.245	0.329	-0.084***
Smoked during pregnancy	0.082	0.107	-0.025*	0.099	0.103	-0.004
Drunk during pregnancy	0.070	0.071	-0.002	0.067	0.076	-0.009
Used drugs during pregnancy	0.007	0.010	-0.003	0.011	0.004	0.007
Month of breastfeeding	14.776	15.142	-0.366	14.733	16.016	-1.283**
Post-partum depression	0.095	0.108	-0.013	0.103	0.099	0.004
N	1899			1889		

Notes: Obese mothers are those whose BMI was equal or greater than 30 in 2012. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 6: Life satisfaction and bodyweight: IV specifications

	Girls					Boys				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Panel A										
z-BMI	-0.293** (0.131)	-0.194 (0.138)	-0.229 (0.144)	-0.275** (0.128)	-0.153 (0.146)	-0.282** (0.115)	-0.214* (0.123)	-0.249** (0.120)	-0.282** (0.114)	-0.200 (0.124)
BIS		0.353*** (0.038)			0.302*** (0.045)		0.287*** (0.029)			0.246*** (0.029)
Bullying			-0.052*** (0.011)		-0.036*** (0.011)			-0.045*** (0.006)		-0.034*** (0.005)
Bad health				-0.123** (0.049)	-0.080* (0.043)				-0.107* (0.063)	-0.108* (0.059)
N	1,899	1,899	1,899	1,899	1,899	1,889	1,887	1,887	1,889	1,887
F-stat	224.088	230.755	218.590	235.825	236.701	273.340	297.488	266.596	270.711	284.046
% Reduction in bodyweight coefficient		34	22	6	48		24	12	-0	29
Panel B										
Obese	-1.078** (0.450)	-0.715 (0.490)	-0.853* (0.512)	-1.003** (0.438)	-0.563 (0.523)	-1.412*** (0.488)	-1.083** (0.544)	-1.254** (0.524)	-1.412*** (0.485)	-1.019* (0.555)
BIS		0.353*** (0.038)			0.304*** (0.045)		0.272*** (0.032)			0.236*** (0.031)
Bullying			-0.050*** (0.012)		-0.034*** (0.012)			-0.041*** (0.006)		-0.031*** (0.005)
Bad health				-0.139*** (0.051)	-0.089** (0.045)				-0.084 (0.066)	-0.091 (0.060)
N	1,899	1,899	1,899	1,899	1,899	1,889	1,887	1,887	1,889	1,887
F-stat	73.777	73.182	76.937	73.248	74.855	54.408	53.522	56.846	55.161	55.336
% Reduction in bodyweight coefficient		34	21	7	48		23	11	-0	28
Panel C										
Weight	-0.017** (0.008)	-0.011 (0.009)	-0.013 (0.009)	-0.016** (0.008)	-0.008 (0.009)	-0.024** (0.009)	-0.018* (0.010)	-0.021** (0.010)	-0.024*** (0.009)	-0.017* (0.010)
Height	0.009 (0.009)	0.004 (0.009)	0.005 (0.010)	0.008 (0.009)	0.002 (0.010)	0.023** (0.009)	0.018* (0.011)	0.021** (0.009)	0.023** (0.009)	0.017* (0.010)
BIS		0.353*** (0.038)			0.302*** (0.045)		0.285*** (0.029)			0.246*** (0.029)
Bullying			-0.052*** (0.011)		-0.036*** (0.011)			-0.044*** (0.006)		-0.033*** (0.005)
Bad health				-0.124** (0.050)	-0.080* (0.044)				-0.094 (0.060)	-0.098* (0.056)
N	1,899	1,899	1,899	1,899	1,899	1,889	1,887	1,887	1,889	1,887
F-stat	138.800	136.749	137.518	138.588	136.449	260.391	287.871	266.822	259.421	288.034
% Reduction in bodyweight coefficient		35	23	7	50		23	11	-0	28

Notes: Clustered standard errors at spatial-unit level in parenthesis. The control variables are the same as those in Table 2. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.