

# Appendix Report

The Social Cost of Childhood Overweight and Obesity  
– Results on Health Care Usage, Well-Being, Education,  
and Labor Market Outcomes Until the age of 21



*Appendix Report – Results on Health Care Usage, Well-Being, Education, and Labor  
Market Outcomes Until the age of 21*

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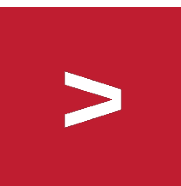
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# 1 Appendix

## 1.1 Appendix 1: Calculation of costs

### *Detailed description of the calculation of the monetary costs of childhood obesity*

Part of the analysis is focused on calculating population-level costs in health care usage and social transfers. All costs are calculated in DKK and adjusted to 2015 prices. The calculations are based on a two-part model: In the first part, we estimate the probability of having any costs (the extensive margin), in the second part we estimate the average costs for those who have any costs (the intensive margin). All models are estimated as relative differences to normal-weight children and are calculated by adding mean of normal weight and model estimate. The second part is estimated on a log-transformed dependent variable of the costs. The log-transformation limits the impact of outliers in the cost variables. The coefficients from the two-part model are estimated in percentages. They are multiplied by the average costs to get a cost-estimate per person with any costs. These estimates from the two-part model are multiplied to get the per-person costs. This per-person cost can then be multiplied for any group to get the group-level aggregate costs. We use an approximation of an average cohort of 60,000 and the population level-shares of overweight and obesity (see Report Table 4.1) to calculate the populations of overweight and obese children. Multiplying the per-person cost on these populations gives the population-level costs.

To illustrate the calculation of the monetary costs, we provide an example in Table 1.1 for the social income transfers at age 21 for obese children based on the OLS model, see also Report Section 4.5. Corresponding costs can be calculated using the estimates from the fixed-effects models.

The OLS estimates present the percentage point differences relative to normal weight and must therefore be added to the means of normal weight. The share of normal weight children who have any social transfers is 10.19%, and for those who have social transfers the average cost is DKK 45,813. The part-one model estimate for obese children is 8.82 pp (higher probability of having social transfers) and 21.69% (higher social transfers costs). Adding up based on means of normal-weight children, obese children have a 19.01% probability of having any social transfers, and conditional on having social transfers the average costs are DKK 55,749. Multiplying the extensive and intensive margin

to get the per-person costs per weight classification, and taking the difference between estimated costs of being normal weight and obese, the average cost of obesity per person is DKK 5,931. Given that 3.8% of a cohort is obese, this is 2,287 obese children, who have a combined societal cost in social transfers per anno of DKK 13.6 million.

**Table 1.1 Calculation method of two-part model**

Description	Calculation	Result
<b>Model part 1: Extensive margin</b>		
OLS estimate on extensive margin for obese in pp: 8.882		
Mean with any social transfers for normal weight children: 10.19%		
Extensive margin: probability of having any social transfers (%)	$10.19 + 8.82$	<b>19.01</b>
<b>Model part 2: Intensive margin</b>		
OLS estimate on intensive margin for obese in percent: 21.69		
Mean social transfers for normal weight children: DKK 45,813		
Intensive margin: average costs per person conditional on having any costs	$\text{DKK } 45,813 * (1 + 0.21)$	<b>DKK 55,749</b>
Difference between normal-weight child and obese child conditional on any costs	$\text{DKK } 55,749 - \text{DKK } 45,813 = \text{DKK } 9,936$	
<b>Per-person cost: Extensive x intensive margin</b>		
Per-person cost for normal weight: $0.1019 * \text{DKK } 45,813 = \text{DKK } 4,668$		
Per-person cost for obese children: Extensive margin x intensive margin	$0.1901 * \text{DKK } 55,749$	DKK 10,599
Difference in per-person costs: cost of obesity per person	$\text{DKK } 10,599 - \text{DKK } 4,668$	<b>DKK 5,931</b>
<b>Societal cost</b>		
Share of obese children in population: 3.8%		
Obese children in average cohort of 60,000: $0.038 * 60,000 = 2,287$		
Total societal cost in social transfers for obesity	$2,287 * \text{DKK } 5,931$	<b>DKK 13,564,715</b>

**Table 1.2 Definitions of variables in conditioning set**

Variable	Description
<b>Child characteristics</b>	
Female	Indicator variable equal to 1 if the child is female and 0 if the child is male.
Native (reference category in the analyses)	Indicator equal to 1 if the child is born in Denmark and at least 1 of the parents are born in Denmark and have Danish citizenship and 0 otherwise

Variable	Description
Immigrant	Indicator equal to 1 if the child is not born in Denmark and neither parent both has Danish citizenship and is born in Denmark and zero otherwise
Descendant	Indicator equal to 1 if the child is born in Denmark and neither parent both has Danish citizenship and is born in Denmark and 0 otherwise.
1 <sup>st</sup> born <sup>a</sup> (reference category in the analyses)	Indicator equal to 1 if the child is first born and 0 otherwise.
2 <sup>nd</sup> born <sup>a</sup>	Indicator equal to 1 if the child is 2 <sup>nd</sup> born and 0 otherwise.
3 <sup>rd</sup> born <sup>a</sup>	Indicator equal to 1 if the child is 3 <sup>rd</sup> born and 0 otherwise.
4 <sup>th</sup> or higher <sup>a</sup>	Indicator equal to 1 if the child is 4 <sup>th</sup> born or higher and 0 otherwise.
Has a father	Indicator equal to 1 if a father is registered in the population registry.
Birth weight	The child's birthweight in grams registered in the Danish birth registry.
Birth length	The child's birth length in cm registered in the Danish birth registry.
Missing birth weight	An indicator equal to 1 if the birthweight is missing and 0 otherwise.
Missing birth length	Indicator equal to 1 if the birth length is missing and 0 otherwise.
Psychiatric diagnosis before age 8 <sup>a</sup>	Indicator equal to 1 if the child has received a behavioral or mental diagnosis (F-diagnosis according to the International Classification of Disease -10 <sup>th</sup> revision) before it turns 8 years and 0 otherwise.
Psychotropic medication before age 8 <sup>a</sup>	Indicator equal to 1 if the child has received a prescription for psychotropic medication (ATC=N) before it turns 8 years and 0 otherwise.
Hospital contacts before age 8 <sup>a</sup>	Number of distinct records of all types in the National Patient Register before a child turns 8 years of age. 0 if no contacts.
Hospitalizations before age 8 <sup>a</sup>	Number of distinct records of type 'inpatient' in the National Patient Register before a child turns 8 years. 0 if no contacts.
<b>Mother characteristics</b>	
Age at birth	Mother's age at the birth of the child.
Psychiatric diagnosis <sup>a</sup>	Indicator equal to 1 if the mother has received a behavioral or mental diagnosis (F-diagnosis according to the International Classification of Disease – 10 <sup>th</sup> revision) before the child turns 8 years and 0 otherwise.
Single <sup>a</sup>	Indicator equal to one if the mother is not registered as cohabiting or married/registered with any partner in the year the child turned 7 years and 0 otherwise.
Cohabiting with partner <sup>a</sup>	Indicator equal to 1 if the mother is registered as cohabiting with a partner in the year the child turned 7 years and 0 otherwise.
Married <sup>a</sup> (reference category in the analyses)	Indicator equal to 1 if the mother is married or in a registered partnership in the year the child turned 7 years and 0 otherwise.
Education level above high school <sup>a</sup>	Indicator equal to 1 if the mother is registered with an educational level above high school in the year the child turned 7 years and 0 otherwise.
Log of total income <sup>a</sup>	Log-transformation of total after-tax income registered according to the Income Statistics Register in the year the child turns 7 years. Consists of all types of income: wage income, social transfers, self-employed, etc. 0 for those with no income or missing income.
Unemployed at age 7 <sup>a</sup>	Indicator equal to 1 if the mother is registered as unemployed in November of the year the child turns 7 years and 0 otherwise.

Variable	Description
Not in labor force at age 7 <sup>a</sup>	Indicator equal to 1 if the mother is registered as being out of the labor force in November of the year the child turns 7 years and 0 otherwise.
Weeks of unemployment benefits per year, age 0-7 <sup>a</sup>	Yearly average number of weeks the mother has received unemployment benefits, average over the years from the child's birth until it turns 7 years.
Weeks of social assistance per year, age 0-7 <sup>a</sup>	Yearly average number of weeks the mother has received social assistance, average over the years from the child's birth until it turns 7 years.
Missing at age 7 <sup>a</sup>	Indicator equal to 1 if the mother is missing in the registries the year the child turns 7 years and 0 otherwise
Missing income at age 7 <sup>a</sup>	Indicator equal to 1 if the mother is not observed in the income register the year the child turns 7 years and 0 otherwise.
<b>Father characteristics</b>	
Age at birth	Father's age at the birth of the child
Psychiatric diagnosis <sup>a</sup>	Indicator equal to 1 if the father has received a behavioral or mental diagnosis (F-diagnosis according to the International Classification of Disease – 10 <sup>th</sup> revision) before the child turns 8 years and 0 otherwise.
Education level above high school <sup>a</sup>	Indicator equal to 1 if the father is registered with an educational level above high school in the year the child turned 7 years and 0 otherwise.
Log of total income <sup>a</sup>	Log-transformation of total after-tax income registered according to the Income Statistics Register in the year the child turns 7 years. Consists of all types of income: wage income, social transfers, self-employed, etc., 0 for those with no income or missing income.
Unemployed at age 7 <sup>a</sup>	Indicator equal to 1 if the father is registered as unemployed in November of the year the child turns 7 years and 0 otherwise.
Not in labor force at age 7 <sup>a</sup>	Indicator equal to 1 if the father is registered as being out of the labor force in November of the year the child turns 7 years and 0 otherwise.
Weeks of unemployment benefits per year, age 0-7 <sup>a</sup>	Yearly average number of weeks the father has received unemployment benefits, average over the years from the child's birth until it turns 7 years.
Weeks of social assistance per year, age 0-7 <sup>a</sup>	Yearly average number of weeks the father has received social assistance, average over the years from the child's birth until it turns 7 years.
Missing at age 7 <sup>a</sup>	Indicator equal to 1 if the father is missing in the registries the year the child turns 7 years and 0 otherwise
Missing income at age 7 <sup>a</sup>	Indicator equal to 1 if the father is not observed in the income register the year the child turns 7 years and 0 otherwise.
No registry information <sup>a</sup>	Indicator equal to 1 if child has no link to father, so that no registry information on the father exists, and 0 otherwise.

Notes: <sup>a</sup> For the elementary school sample, the variable is measured at or up until age 5. Appendix 2: Lower secondary school children.

**Table 1.3 Representativity of analysis sample with BMI measure**

	Coefficient	SE
Female	-0.01***	(0.00)
Immigrant	0.02***	(0.01)
Descendant	0.04***	(0.00)
Ref. group first born		
2 <sup>nd</sup> born	-0.01***	(0.00)
3 <sup>rd</sup> born	-0.02***	(0.00)
4 <sup>th</sup> or higher	-0.03***	(0.00)
Has a father	-0.06**	(0.02)
Birth weight	-0.01***	(0.00)
Birth length	0.00**	(0.00)
Missing birth weight	-0.04***	(0.01)
Missing birth length	0.04*	(0.02)
Psychiatric diagnosis before age 8	-0.05***	(0.00)
Psychotropic medication before age 8	-0.01***	(0.00)
Hospital contacts before age 8	-0.00***	(0.00)
Hospitalizations before age 8	0.00***	(0.00)
Mother characteristics		
Age at birth	0.00***	(0.00)
Psychiatric diagnosis	-0.01***	(0.00)
Immigrant/descendant	-0.00	(0.00)
Single	-0.00	(0.00)
Cohabiting with partner	0.02***	(0.00)
Education level above high school	0.01***	(0.00)
Log of total income	0.00***	(0.00)
Unemployed at age 7	-0.01***	(0.00)
Not in labor force at age 7	-0.01***	(0.00)
Weeks of unemployment benefits per year, age 0-7	-0.00	(0.00)
Weeks of social assistance per year, age 0-7	-0.00***	(0.00)
Missing at age 7	0.02	(0.06)
Missing income at age 7	-0.06	(0.06)



	Coefficient	SE
Father characteristics		
Age at birth	0.00**	(0.00)
Psychiatric diagnosis	-0.01***	(0.00)
Immigrant/descendant	-0.00	(0.00)
Education level above high school	0.01***	(0.00)
Log of total income	0.00***	(0.00)
Unemployed at age 7	-0.00	(0.00)
Not in labor force at age 7	-0.01**	(0.00)
Weeks of unemployment benefits per year, age 0-7	-0.00***	(0.00)
Weeks of social assistance per year, age 0-7	-0.00	(0.00)
Missing at age 7	0.04	(0.05)
Missing income at age 7	-0.03	(0.05)
No registry information	-0.06*	(0.02)
Constant	0.80***	(0.03)
N	545,254	
R-squared	0.24	

Notes: Regression of BMI measure dummy (whether child has a measurement or not) on conditioning set in full lower secondary school population. Including school start year and birth year fixed effects. Robust standard errors in parentheses. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Source: Registry data from Statistics Denmark.

**Table 1.4 Additional descriptive statistics on the father**

	Underweight		Normal weight		Overweight		Obese	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
<b>Father characteristics</b>								
Age at birth	32.56***	(5.63)	32.19	(5.62)	31.95***	(5.96)	31.81***	(6.20)
Psychiatric diagnosis	0.05	(0.22)	0.05	(0.23)	0.07***	(0.26)	0.09***	(0.28)
Education level above high school	0.75***	(0.43)	0.74	(0.44)	0.64***	(0.48)	0.55***	(0.50)
Total income in 10,000s	28.56**	(34.14)	27.59	(71.47)	24.14***	(31.21)	21.13***	(17.56)
Unemployed at age 7	0.02	(0.16)	0.02	(0.15)	0.03***	(0.18)	0.04***	(0.21)
Not in labor force at age 7	0.09**	(0.29)	0.10	(0.30)	0.14***	(0.34)	0.18***	(0.38)
Weeks of social assistance per year, age 0-7	1.97	(7.65)	1.93	(7.48)	3.16***	(9.46)	4.71***	(11.39)
N	29,360		249,116		49,242		12,707	

Notes: Selected relevant characteristics of the sample split by weight class. Test of differences in means by t-tests with reference to normal weight. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: Own calculations based on Danish Registry Data.

**Table 1.5 Descriptive statistics on full sample and sibling sample**

	Full sample		Sibling sample		Test of difference in means between siblings and non-siblings
	Mean	SD	Mean	SD	Difference
Female	0.49	(0.50)	0.49	(0.50)	0.00
Immigrant	0.03	(0.17)	0.03	(0.16)	0.00***
Descendant	0.08	(0.27)	0.09	(0.29)	-0.02***
Has father	0.98	(0.12)	0.99	(0.09)	-0.01***
First child	0.44	(0.50)	0.39	(0.49)	0.10***
Birth weight in grams	3,505	(600)	3,482	(623)	39.23***
Birth length in cm	51.93	(2.76)	51.83	(2.85)	0.17***

	Full sample		Sibling sample		Test of difference in means between siblings and non-siblings
	Mean	SD	Mean	SD	Difference
Psychiatric diagnosis before age 8	0.02	(0.15)	0.02	(0.14)	0.00***
Hospital contacts before age 8	4.56	(4.82)	4.48	(4.64)	0.13***
Age of BMI measurement	14.45	(0.99)	14.41	(1.00)	0.06***
<b>Mother characteristics</b>					
Age at birth	29.45	(4.84)	29.13	(4.53)	0.56***
Psychiatric diagnosis	0.08	(0.26)	0.06	(0.25)	0.02***
Cohabiting with partner	0.77	(0.42)	0.80	(0.40)	-0.05***
Education level above high school	0.72	(0.45)	0.73	(0.44)	-0.02***
Total income in 10,000s	23.19	(13.79)	23.53	(11.23)	-0.57***
Unemployed at age 7	0.03	(0.18)	0.04	(0.18)	-0.00
Not in labor force at age 7	0.17	(0.38)	0.18	(0.38)	-0.01***
Weeks of social assistance per year, age 0-7	4.15	(11.58)	4.46	(12.26)	-0.53***
<b>Father characteristics</b>					
Age at birth	32.18	(5.70)	31.86	(5.34)	0.54***
Psychiatric diagnosis	0.06	(0.23)	0.05	(0.22)	0.01***
Education level above high school	0.72	(0.45)	0.73	(0.44)	-0.03***
Total income in 10,000s	26.94	(63.24)	27.45	(46.64)	-0.87***
Unemployed at age 7	0.03	(0.16)	0.03	(0.16)	0.00
Not in labor force at age 7	0.11	(0.31)	0.10	(0.30)	0.01***
Weeks of social assistance per year, age 0-7	2.22	(8.01)	2.38	(8.42)	-0.29***
N	340,425		140,830		340,425

Notes: Descriptive statistics of means and standard deviations for full sample and sibling sample. Simple t-tests of means between sibling sample and non-sibling sample. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

## Tables for education

**Table 1.6 Sat 9<sup>th</sup> grade exit exams**

	All		Girls		Boys	
	OLS	FE	OLS	FE	OLS	FE
Underweight	-0.68*** (0.14)	-0.46* (0.25)	-0.34** (0.17)	-0.35 (0.44)	-1.02*** (0.21)	-0.60 (0.59)
Overweight	-1.11*** (0.12)	-0.29 (0.24)	-0.86*** (0.15)	0.48 (0.44)	-1.36*** (0.17)	-0.44 (0.47)
Obese	-4.31*** (0.27)	-2.19*** (0.59)	-3.76*** (0.39)	-1.41 (1.22)	-4.75*** (0.37)	-3.40*** (1.11)
N	340,425	140,830	165,891	35,937	174,534	39,652
R-squared	0.058	0.613	0.049	0.633	0.066	0.625
Adjusted R-squared	0.058	0.255	0.048	0.279	0.066	0.264
Number of clusters		67,624		17,590		19,382
Mean of normal weight	95.48	95.89	96.01	96.13	94.98	95.49

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of an indicator for whether the child attended the 9th grade exit exam or not on weight classification. Covariates are measured at age 7 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations, and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.7 Sat 9<sup>th</sup> grade exit exams. By SES.**

	Low SES		High SES	
	OLS	FE	OLS	FE
Underweight	0.04*** (0.01)	-0.00 (0.02)	0.04*** (0.01)	0.00 (0.01)
Overweight	-0.19*** (0.01)	-0.06*** (0.02)	-0.26*** (0.01)	-0.09*** (0.01)
Obese	-0.37*** (0.01)	-0.13*** (0.03)	-0.50*** (0.01)	-0.20*** (0.03)
N	86,859	31,663	235,887	95,112
R-squared	0.192	0.747	0.155	0.737
Adjusted R-squared	0.192	0.516	0.155	0.489
Number of clusters		15,041		45,988

	Low SES		High SES	
	OLS	FE	OLS	FE
Mean of normal weight	-0.27	-0.26	0.23	0.28

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of an indicator for whether the child attended the 9th -grade exit exams or not on weight classification. Covariates are measured at age 7 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations, and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.8 Standardized 9<sup>th</sup> grade GPA**

	All		Girls		Boys	
	OLS	FE	OLS	FE	OLS	FE
Underweight	0.04*** (0.01)	0.00 (0.01)	0.05*** (0.01)	-0.01 (0.02)	0.02*** (0.01)	0.01 (0.02)
Overweight	-0.24*** (0.00)	-0.08*** (0.01)	-0.25*** (0.01)	-0.08*** (0.02)	-0.23*** (0.01)	-0.06*** (0.02)
Obese	-0.45*** (0.01)	-0.17*** (0.02)	-0.49*** (0.01)	-0.21*** (0.04)	-0.42*** (0.01)	-0.13*** (0.03)
N	322,746	130,052	158,427	33,392	164,319	36,191
R-squared	0.210	0.754	0.209	0.770	0.174	0.757
Adjusted R-squared	0.209	0.526	0.208	0.549	0.173	0.523
Number of clusters		62,558		16,345		17,714
Mean of normal weight	0.10	0.15	0.27	0.32	-0.05	-0.00

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of the standardized 9th grade GPA for the child on weight classification. Covariates are measured at age 7 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.9 Standardized 9<sup>th</sup> grade GPA, by SES**

	Low SES		High SES	
	OLS	FE	OLS	FE
Underweight	0.04*** (0.01)	-0.00 (0.02)	0.04*** (0.01)	0.00 (0.01)

	Low SES		High SES	
Overweight	-0.19*** (0.01)	-0.06*** (0.02)	-0.26*** (0.01)	-0.09*** (0.01)
Obese	-0.37*** (0.01)	-0.13*** (0.03)	-0.50*** (0.01)	-0.20*** (0.03)
N	86,859	31,663	235,887	95,112
R-squared	0.192	0.747	0.155	0.737
Adjusted R-squared	0.192	0.516	0.155	0.489
Number of clusters		15,041		45,988
Mean of normal weight	-0.27	-0.26	0.23	0.28

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of the standardized 9th grade GPA for the child on weight classification. Covariates are measured at age 7 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.10 Total absence in 9<sup>th</sup> grade**

	All		Girls		Boys	
	OLS	FE	OLS	FE	OLS	FE
Underweight	-0.16*** (0.05)	0.03 (0.10)	-0.29*** (0.07)	0.20 (0.16)	-0.03 (0.07)	-0.07 (0.20)
Overweight	0.89*** (0.05)	0.19** (0.10)	0.84*** (0.07)	0.24 (0.20)	0.94*** (0.06)	0.25 (0.17)
Obese	2.44*** (0.11)	1.01*** (0.22)	2.39*** (0.17)	0.81* (0.48)	2.47*** (0.14)	1.29*** (0.36)
N	241,657	87,528	115,440	21,940	126,217	25,478
R-squared	0.058	0.629	0.060	0.641	0.058	0.648
Adjusted R-squared	0.058	0.283	0.060	0.294	0.057	0.307
Number of clusters		42,140		10,738		12,466
Mean of normal weight	5.83	5.34	5.98	5.33	5.69	5.24

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of total absence in 9th grade for the child on weight classification. Covariates are measured at age 7 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.11 Total absence in 9<sup>th</sup> grade. By SES.**

	Low SES		High SES	
	OLS	FE	OLS	FE

	Low SES		High SES	
Underweight	-0.11 (0.13)	-0.20 (0.26)	-0.18*** (0.05)	0.09 (0.10)
Overweight	0.88*** (0.09)	0.10 (0.19)	0.90*** (0.05)	0.22** (0.11)
Obese	2.56*** (0.17)	1.00*** (0.34)	2.32*** (0.13)	1.01*** (0.28)
N	70,277	23,871	171,380	61,389
R-squared	0.051	0.631	0.042	0.620
Adjusted R-squared	0.051	0.294	0.042	0.262
Number of clusters		11,330		29,750
Mean of normal weight	7.10	6.53	5.35	4.88

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of total absence in 9th grade for the child on weight classification. Covariates are measured at age 7 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.12 High school enrollment by age 18**

	All		Girls		Boys	
	OLS	FE	OLS	FE	OLS	FE
Underweight	0.12 (0.24)	-0.53 (0.46)	0.00 (0.29)	-1.13 (0.77)	0.39 (0.38)	-0.28 (0.99)
Overweight	-9.99*** (0.21)	-4.41*** (0.44)	-7.77*** (0.28)	-3.59*** (0.83)	-12.23*** (0.32)	-6.13*** (0.88)
Obese	-21.68*** (0.42)	-7.52*** (0.94)	-19.34*** (0.63)	-9.78*** (1.95)	-23.55*** (0.57)	-7.92*** (1.75)
N	340,425	140,830	165,891	35,937	174,534	39,652
R-squared	0.179	0.674	0.165	0.681	0.152	0.693
Adjusted R-squared	0.179	0.372	0.164	0.373	0.152	0.397
Number of clusters		67,624		17,590		19,382
Mean of normal weight	77.49	78.81	84.72	85.69	70.71	72.04

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of an indicator for whether the child enrolled into high school at age 18 or not on weight classification. Covariates are measured at age 7 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.13 High school enrollment by age 18, by SES**

	Low SES		High SES	
	OLS	FE	OLS	FE
Underweight	0.21 (0.53)	-0.20 (1.04)	0.07 (0.26)	-0.51 (0.51)
Overweight	-8.73*** (0.39)	-3.46*** (0.79)	-10.56*** (0.26)	-4.80*** (0.54)
Obese	-19.49*** (0.62)	-4.30*** (1.40)	-23.19*** (0.57)	-10.36*** (1.32)
N	95,106	36,174	245,319	101,007
R-squared	0.189	0.693	0.136	0.650
Adjusted R-squared	0.188	0.414	0.136	0.321
Number of clusters		17,126		48,797
Mean of normal weight	65.49	66.53	81.70	82.86

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of an indicator for whether the child enrolled into high school at age 18 or not on weight classification. Covariates are measured at age 7 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.14 Enrollment into vocational education by age 18**

	All		Girls		Boys	
	OLS	FE	OLS	FE	OLS	FE
Underweight	-1.34*** (0.23)	-0.19 (0.48)	-0.99*** (0.27)	0.16 (0.79)	-1.83*** (0.38)	-1.07 (1.05)
Overweight	8.87*** (0.22)	4.03*** (0.46)	6.69*** (0.28)	3.13*** (0.85)	11.02*** (0.33)	4.95*** (0.93)
Obese	15.59*** (0.44)	5.97*** (1.01)	13.28*** (0.63)	7.40*** (1.97)	17.44*** (0.60)	3.39* (1.99)
N	340,425	140,830	165,891	35,937	174,534	39,652
R-squared	0.089	0.617	0.066	0.620	0.062	0.637
Adjusted R-squared	0.089	0.262	0.065	0.253	0.062	0.288
Number of clusters		67,624		17,590		19,382
Mean of normal weight	20.28	19.48	13.28	12.52	26.83	26.10

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of an indicator for whether the child enrolled in vocational education at age 18 or not on weight classification. Covariates are measured at age 7 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.



**Table 1.15 Enrollment into vocational education by age 18, by SES**

	Low SES		High SES	
	OLS	FE	OLS	FE
Underweight	-1.72*** (0.52)	-0.17 (1.11)	-1.20*** (0.25)	-0.25 (0.53)
Overweight	6.64*** (0.39)	3.14*** (0.86)	9.83*** (0.26)	4.40*** (0.56)
Obese	10.91*** (0.65)	1.90 (1.56)	19.01*** (0.58)	9.60*** (1.36)
N	95,106	36,174	245,319	101,007
R-squared	0.071	0.598	0.088	0.621
Adjusted R-squared	0.071	0.235	0.087	0.267
Number of clusters		17,126		48,797
Mean of normal weight	27.29	26.85	17.82	17.03

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of an indicator for whether the child enrolled into vocational education at age 18 or not on weight classification. Covariates are measured at age 7 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations, and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.16 Not enrolled in upper secondary education by age 18**

	All		Girls		Boys	
	OLS	FE	OLS	FE	OLS	FE
Underweight	0.85*** (0.15)	0.52* (0.30)	0.40** (0.19)	0.66 (0.52)	1.33*** (0.24)	0.85 (0.65)
Overweight	2.11*** (0.13)	0.83*** (0.29)	2.16*** (0.18)	0.76 (0.55)	2.08*** (0.19)	1.01* (0.56)
Obese	7.27*** (0.32)	2.43*** (0.69)	7.87*** (0.48)	3.07** (1.45)	6.80*** (0.43)	3.46*** (1.32)
N	340,425	140,830	165,891	35,937	174,534	39,652
R-squared	0.137	0.620	0.129	0.642	0.144	0.637
Adjusted R-squared	0.137	0.268	0.129	0.296	0.144	0.287
Number of clusters		67,624		17,590		19,382
Mean of normal weight	6.22	5.47	5.43	4.93	6.96	6.22

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of an indicator for whether the child has not enrolled into upper secondary education at age 18 on weight classification. Covariates are measured at age 7 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.17 Not enrolled in upper secondary education by age 18, SES**

	Low SES		High SES	
	OLS	FE	OLS	FE
Underweight	1.29*** (0.40)	0.73 (0.77)	0.71*** (0.15)	0.43 (0.31)
Overweight	2.72*** (0.29)	0.73 (0.62)	1.87*** (0.14)	0.91*** (0.30)
Obese	8.98*** (0.54)	2.72** (1.20)	5.94*** (0.38)	2.10** (0.83)
N	95,106	36,174	245,319	101,007
R-squared	0.150	0.641	0.093	0.584
Adjusted R-squared	0.150	0.316	0.093	0.194
Number of clusters		17,126		48,797
Mean of normal weight	12.11	11.42	4.15	3.50

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of an indicator for whether the child has not enrolled into upper secondary education at age 18 on weight classification. Covariates are measured at age 7 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

## Tables for mental health

**Table 1.18 Mental or behavioral diagnosis**

	All		Girls		Boys	
	OLS	FE	OLS	FE	OLS	FE
Underweight	0.43*** (0.15)	0.51 (0.31)	0.17 (0.22)	1.58** (0.64)	0.71*** (0.20)	-0.88 (0.58)
Overweight	0.71*** (0.12)	-0.14 (0.28)	0.82*** (0.19)	-0.37 (0.60)	0.60*** (0.16)	-0.48 (0.48)
Obese	1.56*** (0.24)	0.57 (0.57)	1.81*** (0.41)	-1.56 (1.22)	1.36*** (0.30)	0.83 (0.97)
N	340,425	140,830	165,891	35,937	174,534	39,652
R-squared	0.029	0.527	0.026	0.540	0.028	0.536
Adjusted R-squared	0.028	0.089	0.026	0.097	0.028	0.091
Number of clusters		67,624		17,590		19,382
Mean of normal weight	5.78	5.11	7.08	6.17	4.56	4.01

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of an indicator for whether the child has had a mental or behavioral diagnosis or not on weight classification. Covariates are measured at age 7 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.19 Mental or behavioral diagnoses, by SES**

	Low SES		High SES	
	OLS	FE	OLS	FE
Underweight	0.95*** (0.33)	1.37* (0.71)	0.26 (0.17)	0.21 (0.34)
Overweight	0.57** (0.22)	-0.27 (0.52)	0.79*** (0.15)	0.03 (0.33)
Obese	1.36*** (0.38)	0.40 (0.92)	1.72*** (0.32)	0.72 (0.74)
N	95,106	36,174	245,319	101,007
R-squared	0.040	0.536	0.022	0.523
Adjusted R-squared	0.040	0.117	0.022	0.077
Number of clusters		17,126		48,797

	Low SES		High SES	
	OLS	FE	OLS	FE
Mean of normal weight	6.99	6.15	5.36	4.75

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of an indicator for whether the child has had a mental or behavioral diagnosis or not on weight classification. Covariates are measured at age 7 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.20 Has psychotropic medication**

	All		Girls		Boys	
	OLS	FE	OLS	FE	OLS	FE
Underweight	0.56*** (0.14)	0.42 (0.28)	0.22 (0.20)	1.03* (0.56)	0.91*** (0.20)	-0.59 (0.53)
Overweight	0.81*** (0.12)	0.33 (0.25)	0.80*** (0.17)	-0.08 (0.53)	0.82*** (0.15)	0.35 (0.46)
Obese	1.57*** (0.23)	0.61 (0.52)	1.86*** (0.37)	-1.10 (1.12)	1.34*** (0.29)	0.51 (0.88)
N	340,425	140,830	165,891	35,937	174,534	39,652
R-squared	0.028	0.545	0.018	0.551	0.040	0.574
Adjusted R-squared	0.028	0.124	0.017	0.118	0.040	0.164
Number of clusters		67,624		17,590		19,382
Mean of normal weight	5.00	4.48	5.54	4.93	4.50	4.04

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of an indicator for whether the child has received psychotropic medication or not on weight classification. Covariates are measured at age 7 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations, and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.21 Has psychotropic medication, by SES**

	Low SES		High SES	
	OLS	FE	OLS	FE
Underweight	1.01*** (0.29)	1.51** (0.61)	0.41** (0.16)	0.11 (0.32)

	Low SES		High SES	
Overweight	1.09*** (0.21)	0.49 (0.45)	0.66*** (0.14)	0.22 (0.31)
Obese	0.83** (0.33)	0.70 (0.80)	2.20*** (0.32)	0.54 (0.71)
N	95,106	36,174	245,319	101,007
R-squared	0.040	0.551	0.023	0.544
Adjusted R-squared	0.040	0.144	0.023	0.117
Number of clusters		17,126		48,797
Mean of normal weight	5.43	4.70	4.86	4.39

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of an indicator for whether the child has received psychotropic medication or not on weight classification. Covariates are measured at age 7 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.22 Psychotropic medication costs**

	All		Girls		Boys	
	OLS	FE	OLS	FE	OLS	FE
Underweight	0.01 (0.04)	-0.09 (0.23)	-0.02 (0.06)	0.52 (0.35)	0.04 (0.06)	-0.12 (0.46)
Overweight	0.06* (0.04)	-0.04 (0.17)	0.16*** (0.05)	-0.03 (0.36)	-0.07 (0.05)	0.30 (0.33)
Obese	0.14** (0.06)	0.08 (0.31)	0.13 (0.09)	0.53 (1.11)	0.16* (0.08)	0.07 (0.39)
N	18,062	1,106	9,619	298	8,443	323
R-squared	0.078	0.717	0.035	0.811	0.075	0.787
Adjusted R-squared	0.075	0.383	0.029	0.455	0.069	0.409
Number of clusters		548		148		160
Mean of normal weight	6.77	7.30	6.45	6.88	7.14	7.69

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of total psychotropic medication costs for the child on weight classification. Covariates are measured at age 7 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.23 Psychotropic medication costs, by SES**

	Low SES		High SES	
	OLS	FE	OLS	FE
Underweight	0.12 (0.08)	-1.04*** (0.40)	-0.04 (0.05)	0.26 (0.27)
Overweight	-0.01 (0.06)	0.36 (0.33)	0.11** (0.04)	-0.08 (0.21)
Obese	0.03 (0.10)	0.08 (0.44)	0.22*** (0.08)	0.52 (0.43)
N	5,518	342	12,544	731
R-squared	0.096	0.783	0.074	0.736
Adjusted R-squared	0.087	0.408	0.070	0.399
Number of clusters		168		364
Mean of normal weight	6.77	7.39	6.77	7.27

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of total psychotropic medication costs for the child on weight classification. Covariates are measured at age 7 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

## Tables for health

**Table 1.24 Visiting a general practitioner at age 18**

	All		Girls		Boys	
	OLS	FE	OLS	FE	OLS	FE
Underweight	-2.05*** (0.22)	-1.38*** (0.50)	-1.37*** (0.24)	-1.16 (0.79)	-2.89*** (0.38)	-1.33 (1.17)
Overweight	-0.35** (0.17)	0.30 (0.41)	-0.80*** (0.20)	0.21 (0.66)	0.11 (0.28)	0.19 (0.92)
Obese	-1.11*** (0.33)	-1.11 (0.83)	-1.93*** (0.42)	-1.94 (1.34)	-0.49 (0.50)	-1.89 (1.78)
N	340,425	140,830	165,891	35,937	174,534	39,652
R-squared	0.043	0.540	0.013	0.549	0.010	0.541
Adjusted R-squared	0.043	0.114	0.013	0.114	0.009	0.099
Number of clusters		67,624		17,590		19,382
Mean of normal weight	85.21	84.54	92.10	91.31	78.74	77.87

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of an indicator for whether the child has visited a general practitioner at age 18 or not on weight classification. Covariates are measured at age 7 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.25 Visiting a general practitioner at age 18, by SES**

	Low SES		High SES	
	OLS	FE	OLS	FE
Underweight	-1.34*** (0.45)	-1.91* (1.03)	-2.29*** (0.26)	-1.30** (0.58)
Overweight	-0.18 (0.31)	0.11 (0.74)	-0.43** (0.21)	0.43 (0.51)
Obese	-0.66 (0.50)	-0.77 (1.28)	-1.48*** (0.45)	-1.48 (1.14)
N	95,106	36,174	245,319	101,007
R-squared	0.044	0.537	0.042	0.542
Adjusted R-squared	0.044	0.119	0.042	0.113
Number of clusters		17,126		48,797

	Low SES		High SES	
	OLS	FE	OLS	FE
Mean of normal weight	84.31	83.68	85.52	84.83

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of an indicator for whether the child has visited a general practitioner at age 18 or not on weight classification. Covariates are measured at age 7 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.26 Primary sector costs at age 18**

	All		Girls		Boys	
	OLS	FE	OLS	FE	OLS	FE
Underweight	-0.05*** (0.01)	-0.04** (0.02)	-0.06*** (0.01)	-0.04 (0.03)	-0.05*** (0.01)	-0.03 (0.04)
Overweight	0.00 (0.01)	-0.01 (0.01)	-0.00 (0.01)	0.01 (0.03)	0.00 (0.01)	-0.01 (0.03)
Obese	-0.01 (0.01)	-0.03 (0.03)	-0.02 (0.02)	-0.11* (0.05)	-0.00 (0.02)	0.00 (0.06)
N	297,555	108,869	154,443	31,015	143,112	26,838
R-squared	0.071	0.564	0.021	0.567	0.011	0.543
Adjusted R-squared	0.071	0.155	0.020	0.147	0.010	0.098
Number of clusters		52,650		15,219		13,195
Mean of normal weight	6.53	6.51	6.80	6.76	6.25	6.24

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of total primary sector costs of the child at age 18 on weight classification. Covariates are measured at age 7 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.27 Primary sector costs at age 18, by SES**

	Low SES		High SES	
	OLS	FE	OLS	FE
Underweight	-0.04** (0.02)	-0.03 (0.04)	-0.06*** (0.01)	-0.05** (0.02)



	Low SES		High SES	
Overweight	0.00 (0.01)	-0.04 (0.03)	-0.00 (0.01)	-0.00 (0.02)
Obese	-0.00 (0.02)	0.01 (0.04)	-0.02 (0.02)	-0.05 (0.04)
N	81,994	27,387	215,561	78,651
R-squared	0.078	0.570	0.068	0.564
Adjusted R-squared	0.077	0.173	0.068	0.150
Number of clusters		13,085		38,232
Mean of normal weight	6.52	6.49	6.54	6.52

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of total primary sector costs of the child at age 18 on weight classification. Covariates are measured at age 7 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.28 Hospital contact at age 18**

	All		Girls		Boys	
	OLS	FE	OLS	FE	OLS	FE
Underweight	-1.72*** (0.22)	-0.57 (0.50)	-1.29*** (0.31)	0.38 (0.97)	-2.21*** (0.32)	-1.37 (0.99)
Overweight	1.17*** (0.19)	-0.34 (0.44)	1.71*** (0.27)	-0.51 (0.90)	0.64** (0.26)	0.31 (0.84)
Obese	1.38*** (0.35)	-1.06 (0.89)	2.29*** (0.54)	-1.92 (1.90)	0.66 (0.47)	0.51 (1.65)
N	340,425	140,830	165,891	35,937	174,534	39,652
R-squared	0.138	0.560	0.153	0.576	0.123	0.562
Adjusted R-squared	0.137	0.153	0.153	0.168	0.123	0.141
Number of clusters		67,624		17,590		19,382
Mean of normal weight	19.92	19.19	20.80	19.57	19.09	18.59

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of an indicator for whether the child has had a hospital contact at age 18 or not on weight classification. Covariates are measured at age 7 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.29 Hospital contact at age 18, by SES**

	Low SES		High SES	
	OLS	FE	OLS	FE
Underweight	-1.28*** (0.47)	-0.29 (1.05)	-1.88*** (0.25)	-0.98* (0.58)
Overweight	1.41*** (0.33)	-1.06 (0.79)	1.07*** (0.23)	-0.24 (0.55)
Obese	1.94*** (0.54)	-0.12 (1.37)	0.94** (0.47)	-1.36 (1.20)
N	95,106	36,174	245,319	101,007
R-squared	0.141	0.566	0.135	0.558
Adjusted R-squared	0.141	0.174	0.135	0.145
Number of clusters		17,126		48,797
Mean of normal weight	21.88	21.03	19.23	18.59

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of an indicator for whether the child has had a hospital contact at age 18 or not on weight classification. Covariates are measured at age 7 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.30 Secondary sector costs at age 18**

	All		Girls		Boys	
	OLS	FE	OLS	FE	OLS	FE
Underweight	-0.01 (0.02)	-0.06 (0.10)	-0.06** (0.03)	-0.11 (0.20)	0.05* (0.03)	0.12 (0.20)
Overweight	0.04*** (0.02)	0.02 (0.08)	0.06*** (0.02)	-0.12 (0.17)	0.02 (0.02)	0.13 (0.18)
Obese	0.08*** (0.03)	0.22 (0.15)	0.11*** (0.04)	-0.09 (0.30)	0.06 (0.04)	0.20 (0.29)
N	73,826	6,910	37,607	1,781	36,219	1,762
R-squared	0.015	0.531	0.017	0.565	0.008	0.556
Adjusted R-squared	0.014	0.056	0.015	0.085	0.006	0.064
Number of clusters		3,426		887		879
Mean of normal weight	8.16	8.22	8.26	8.33	8.06	8.10

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of total secondary sector costs of the child at age 18 on weight classification. Covariates are measured at age 7 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.31 Secondary sector costs at age 18, by SES**

	Low SES		High SES	
	OLS	FE	OLS	FE
Underweight	0.02 (0.04)	-0.01 (0.18)	-0.02 (0.02)	-0.05 (0.12)
Overweight	0.02 (0.03)	-0.03 (0.13)	0.06*** (0.02)	0.06 (0.11)
Obese	0.04 (0.04)	0.19 (0.22)	0.12*** (0.04)	0.32 (0.22)
N	22,245	2,201	51,581	4,546
R-squared	0.022	0.545	0.014	0.539
Adjusted R-squared	0.019	0.064	0.013	0.062
Number of clusters		1,083		2,263
Mean of normal weight	8.18	8.16	8.15	8.24

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of total secondary sector costs of the child at age 18 on weight classification. Covariates are measured at age 7 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

## Tables for social income transfers

**Table 1.32 Probability of receiving a social income transfer at age 21**

	All		Girls		Boys	
	OLS	FE	OLS	FE	OLS	FE
Underweight	0.64*** (0.23)	1.42** (0.62)	-0.34 (0.30)	-0.32 (1.27)	1.75*** (0.35)	2.58** (1.30)
Overweight	3.92*** (0.21)	2.06*** (0.60)	4.34*** (0.31)	2.66** (1.23)	3.51*** (0.29)	1.66 (1.11)
Obese	8.82*** (0.45)	5.22*** (1.27)	10.42*** (0.70)	8.59*** (2.81)	7.65*** (0.58)	4.73** (2.33)
N	224,235	58,576	107,622	14,209	116,613	16,713
R-squared	0.077	0.591	0.081	0.615	0.076	0.604
Adjusted R-squared	0.077	0.196	0.080	0.233	0.075	0.212
Number of clusters		28726		7028		8264
Mean of normal weight	10.19	9.86	9.91	9.86	10.44	10.24

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of the probability of receiving social income transfers for the child at age 21 on weight classification. Covariates are measured at age 7 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations, and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.33 Probability of receiving a social income transfer at age 21, by SES**

	Low SES		High SES	
	OLS	FE	OLS	FE
Underweight	0.74 (0.54)	2.29 (1.46)	0.59** (0.24)	1.32** (0.67)
Overweight	4.20*** (0.41)	1.77 (1.15)	3.78*** (0.24)	2.19*** (0.70)
Obese	8.61*** (0.71)	5.98*** (2.04)	8.97*** (0.58)	4.20** (1.64)
N	95,106	36,174	245,319	101,007
R-squared	0.128	0.588	0.070	0.546
Adjusted R-squared	0.128	0.215	0.070	0.122
Number of clusters		17,126		48,797

	Low SES		High SES	
	OLS	FE	OLS	FE
Mean of normal weight	11.27	10.94	5.13	4.60

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of the probability of receiving social income transfers for the child at age 21 on weight classification. Covariates are measured at age 7 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.34 Social income transfers**

	All		Girls		Boys	
	OLS	FE	OLS	FE	OLS	FE
Underweight	0.09*** (0.03)	0.26* (0.15)	0.05 (0.04)	0.31 (0.36)	0.12*** (0.04)	0.33 (0.25)
Overweight	0.09*** (0.02)	0.13 (0.11)	0.08*** (0.03)	-0.09 (0.22)	0.10*** (0.03)	0.41* (0.23)
Obese	0.22*** (0.03)	0.16 (0.15)	0.22*** (0.04)	-0.02 (0.28)	0.21*** (0.04)	0.56** (0.27)
N	25,921	1,912	12,127	502	13,794	593
R-squared	0.057	0.567	0.050	0.631	0.054	0.626
Adjusted R-squared	0.055	0.091	0.045	0.071	0.050	0.101
Number of clusters		946		249		294
Mean of normal weight	10.15	10.33	10.28	10.62	10.04	10.20

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of log-transformed social income transfers for the child on weight classification on weight classification. Covariates are measured at age 7 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.35 Social income transfers, by SES**

	Low SES		High SES	
	OLS	FE	OLS	FE
Underweight	0.07 (0.04)	0.16 (0.17)	0.10*** (0.04)	0.67** (0.29)

	Low SES		High SES	
Overweight	0.09*** (0.03)	0.20 (0.13)	0.09*** (0.03)	-0.02 (0.23)
Obese	0.20*** (0.04)	0.06 (0.15)	0.23*** (0.04)	0.26 (0.36)
N	11,758	1,168	14,163	695
R-squared	0.060	0.576	0.047	0.592
Adjusted R-squared	0.055	0.078	0.043	0.053
Number of clusters		577		345
Mean of normal weight	10.29	10.42	10.05	10.17

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of log-transformed social income transfers for the child on weight classification on weight classification. Covariates are measured at age 7 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

## 1.2 Appendix 3: Elementary school children

**Table 1.36 Representativity of sample with BMI measurements**

	Coefficient	SE
Female	-0.001	(0.001)
Immigrant	-0.081***	(0.006)
Descendant	0.003	(0.004)
<b>Ref. group first born.</b>		
2 <sup>nd</sup> born	-0.006***	(0.001)
3 <sup>rd</sup> born	-0.017***	(0.002)
4 <sup>th</sup> or higher	-0.030***	(0.003)
Has a father	-0.038	(0.020)
Birth weight	0.005**	(0.002)
Birth length	-0.000	(0.000)
Missing birth weight	-0.018*	(0.008)
Missing birth length	0.001	(0.007)
Psychiatric diagnosis before age 5	-0.062***	(0.005)
Psychotropic medication before age 5	-0.012***	(0.003)
Hospital contacts before age 5	-0.003***	(0.000)
Hospitalizations before age 5	0.001	(0.000)
<b>Mother characteristics</b>		
Age at birth	0.000**	(0.000)
Psychiatric diagnosis	-0.000	(0.002)
Immigrant/descendant	-0.006*	(0.003)
Single	0.016***	(0.003)
Cohabiting with partner	0.012***	(0.002)
Education level above high school	0.007***	(0.002)
Log of total income	0.003***	(0.001)
Unemployed at age 5	-0.001	(0.003)
Not in labor force at age 5	-0.010***	(0.002)
Weeks of unemployment benefits per year, age 0-5	0.001**	(0.000)
Weeks of social assistance per year, age 0-5	0.000	(0.000)

	Coefficient	SE
Missing at age 5	-0.056	(0.094)
Missing income at age 5	-0.082	(0.094)
<b>Father characteristics</b>		
Age at birth	-0.000	(0.000)
Psychiatric diagnosis	-0.007**	(0.002)
Immigrant/descendant	0.008**	(0.003)
Education level above high school	0.003*	(0.002)
Log of total income	0.001*	(0.000)
Unemployed at age 7	-0.005	(0.003)
Not in labor force at age 7	-0.006*	(0.002)
Weeks of unemployment benefits per year, age 0-7	0.001***	(0.000)
Weeks of social assistance per year, age 0-7	0.000**	(0.000)
Missing at age 7	-0.025	(0.048)
Missing income at age 7	0.007	(0.048)
No registry information	-0.029	(0.020)
Constant	0.944***	(0.027)
N	392,986	
R-squared	0.175	

Notes: Regression of BMI measure dummy (whether child has a measurement or not) on conditioning set in full elementary school population. Including school start year and birth year-fixed effects. Robust standard errors in parentheses. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: Registry data from Statistics Denmark.



**Table 1.37 Additional descriptive statistics on father**

	Underweight		Normal weight		Overweight		Obese	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
<b>Father characteristics</b>								
Age at birth	33.05***	(5.65)	32.84	(5.69)	32.74***	(6.07)	33.01***	(6.48)
Psychiatric diagnosis	0.08***	(0.27)	0.08	(0.28)	0.10***	(0.30)	0.13***	(0.33)
Education level above high school	0.77***	(0.42)	0.76	(0.43)	0.68***	(0.47)	0.58***	(0.49)
Total income in 10,000s	30.15**	(24.94)	29.67	(31.57)	27.21***	(142.72)	22.79***	(15.21)
Unemployed at age 5	0.03	(0.18)	0.03	(0.18)	0.05***	(0.21)	0.07***	(0.25)
Not in labor force at age 5	0.09**	(0.29)	0.10	(0.30)	0.14***	(0.34)	0.18***	(0.39)
Weeks of social assistance per year, age 0-5	0.80***	(3.98)	0.88	(4.15)	1.40***	(5.21)	2.16***	(6.40)
N	26,181		252,335		30,737		7,993	

Notes: Selected relevant characteristics of the sample split by weight classification. Test of differences in means by t-tests with reference to normal weight. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: Own calculations based on Danish Registry Data.

**Table 1.38 Descriptive statistics of full elementary school sample and sibling sample**

	Full sample		Sibling sample		Test of difference in means between siblings and non-siblings
	Mean	SD	Mean	SD	Difference
Female	0.49	(0.50)	0.49	(0.50)	0.00*
Immigrant	0.02	(0.16)	0.02	(0.13)	0.01***
Descendant	0.08	(0.27)	0.07	(0.26)	0.00***
Has father	0.99	(0.11)	0.99	(0.08)	-0.01***
First child	0.45	(0.50)	0.39	(0.49)	0.10***

	Full sample		Sibling sample		Test of difference in means between siblings and non-siblings
	Mean	SD	Mean	SD	Difference
Birth weight	3,489	(589)	3,452	(626)	61.61***
Birth length	51.77	(2.73)	51.60	(2.89)	0.27***
Psychiatric diagnosis before age 5	0.02	(0.13)	0.01	(0.12)	0.00***
Hospital contacts before age 5	5.03	(4.72)	5.05	(4.59)	-0.02
In public school in 2 <sup>nd</sup> grade (%)	0.83	(0.37)	0.84	(0.36)	-0.02***
Age of BMI measurement	6.77	(0.80)	6.77	(0.80)	-0.01***
<b>Mother characteristics</b>					
Age at birth	29.59	(4.92)	28.73	(4.38)	1.42***
Psychiatric diagnosis	0.12	(0.33)	0.11	(0.32)	0.02***
Cohabiting with partner	0.77	(0.42)	0.81	(0.39)	-0.06***
Education level above high school	0.77	(0.42)	0.79	(0.41)	-0.03***
Total income in 10,000s	24.85	(20.98)	25.68	(29.71)	-1.39***
Unemployed at age 5	0.05	(0.21)	0.04	(0.21)	0.00***
Not in labor force at age 5	0.18	(0.38)	0.17	(0.37)	0.02***
Weeks of social assistance per year, age 0-5	2.74	(9.03)	2.68	(9.10)	0.10***
<b>Father characteristics</b>					
Age at birth	32.85	(5.74)	32.53	(5.33)	0.54***
Psychiatric diagnosis	0.09	(0.28)	0.08	(0.27)	0.01***
Education level above high school	0.75	(0.43)	0.77	(0.42)	-0.04***
Total income in 10,000s	29.30	(53.02)	30.26	(77.76)	-1.59***
Unemployed at age 5	0.04	(0.19)	0.03	(0.18)	0.01***
Not in labor force at age 5	0.10	(0.31)	0.09	(0.29)	0.02***

	Full sample		Sibling sample		Test of difference in means between siblings and non-siblings
	Mean	SD	Mean	SD	Difference
Weeks of social assistance per year, age 0-5	0.96	(4.33)	0.87	(4.15)	0.14***
N	317,246		125,240		317,246

Notes: Descriptive statistics of means and standard deviations for full sample and sibling sample. Simple t-tests of means between sibling sample and non-sibling sample. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Source: VIVE.

## Tables on education

**Table 1.39 Sat national test in 2<sup>nd</sup> grade reading**

	All		Girls		Boys	
	OLS	FE	OLS	FE	OLS	FE
Underweight	-0.49* (0.25)	-0.20 (0.30)	-0.55 (0.35)	-0.48 (0.55)	-0.42 (0.36)	-1.07* (0.61)
Overweight	-0.36 (0.23)	-0.56* (0.31)	-0.24 (0.31)	0.11 (0.56)	-0.51 (0.36)	-0.67 (0.67)
Obese	-0.76* (0.45)	-1.49** (0.73)	0.44 (0.58)	-1.75 (1.28)	-2.41*** (0.72)	-3.07* (1.68)
N	317,246	125,240	154,913	31,608	162,333	35,110
R-squared	0.018	0.865	0.018	0.888	0.018	0.853
Adjusted R-squared	0.018	0.737	0.017	0.778	0.018	0.711
Number of clusters		60,815		15,549		17,267
Mean of normal weight	82.04	83.19	82.40	83.38	81.72	83.17

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of an indicator for whether the child attended the National Test of reading in 2<sup>nd</sup> grade or not on weight classification. Covariates are measured at age 5 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.40 Sat national test in 2<sup>nd</sup> grade reading, SES**

	Low SES – education		High SES – education	
	OLS	FE	OLS	FE
Underweight	0.32 (0.56)	-0.63 (0.84)	-0.72** (0.28)	-0.13 (0.32)
Overweight	0.18 (0.44)	-0.69 (0.75)	-0.58** (0.28)	-0.51 (0.33)
Obese	-1.12 (0.72)	-1.69 (1.39)	-0.61 (0.58)	-1.58* (0.83)
N	72,899	24,719	244,347	97,343
R-squared	0.023	0.810	0.017	0.882
Adjusted R-squared	0.023	0.634	0.017	0.771
Number of clusters		11,882		47,403

	Low SES – education		High SES – education	
Mean of normal weight	80.99	82.08	82.34	83.49

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of an indicator for whether the child attended the National Test on reading in 2nd grade or not on weight classification. Covariates are measured at age 5 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.41 Sat National Test in 3<sup>rd</sup> grade math**

	All		Girls		Boys	
	OLS	FE	OLS	FE	OLS	FE
Underweight	-0.56** (0.26)	-0.22 (0.32)	-0.41 (0.36)	0.11 (0.57)	-0.69* (0.37)	-1.01 (0.68)
Overweight	-0.30 (0.24)	-0.74** (0.33)	-0.24 (0.32)	0.01 (0.59)	-0.36 (0.36)	-1.85*** (0.71)
Obese	-0.45 (0.46)	-0.66 (0.75)	1.21** (0.58)	0.15 (1.26)	-2.70*** (0.74)	-3.96** (1.82)
N	317,246	125,240	154,913	31,608	162,333	35,110
R-squared	0.018	0.856	0.018	0.881	0.018	0.842
Adjusted R-squared	0.017	0.720	0.017	0.765	0.018	0.689
Number of clusters		60,815		15,549		17,267
Mean of normal weight	81.06	82.26	81.38	82.38	80.77	82.25

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of an indicator for whether the child attended the National Test on math in 3rd grade or not on weight classification. Covariates are measured at age 5 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.42 Sat National Test in 3<sup>rd</sup> grade mathematics, by SES**

	Low SES – education		High SES – education	
	OLS	FE	OLS	FE
Underweight	0.05 (0.57)	-0.40 (0.89)	-0.74** (0.29)	-0.16 (0.34)
Overweight	0.27 (0.45)	-1.26 (0.79)	-0.53* (0.28)	-0.53 (0.35)
Obese	-1.19 (0.74)	0.65 (1.48)	-0.06 (0.59)	-1.75** (0.81)
N	72,899	24,719	244,347	97,343
R-squared	0.021	0.797	0.018	0.874
Adjusted R-squared	0.020	0.607	0.018	0.755
Number of clusters		11,882		47,403
Mean of normal weight	80.19	81.26	81.30	82.53

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of an indicator for whether the child attended the National Test on mathematics in 3rd grade or not on weight classification. Covariates are measured at age 5 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.43 Standardized test score in 2<sup>nd</sup> grade reading**

	All		Girls		Boys	
	OLS	FE	OLS	FE	OLS	FE
Underweight	0.02*** (0.01)	-0.01 (0.01)	0.02** (0.01)	0.01 (0.03)	0.02* (0.01)	-0.01 (0.03)
Overweight	-0.10*** (0.01)	-0.01 (0.01)	-0.10*** (0.01)	-0.01 (0.02)	-0.11*** (0.01)	-0.02 (0.03)
Obese	-0.22*** (0.01)	-0.03 (0.03)	-0.21*** (0.02)	0.05 (0.05)	-0.25*** (0.02)	-0.03 (0.07)
N	259,668	99,608	127,434	25,349	132,234	27,697
R-squared	0.103	0.673	0.096	0.685	0.082	0.675
Adjusted R-squared	0.103	0.362	0.095	0.378	0.082	0.357
Number of clusters		48,445		12,479		13,627
Mean of normal weight	0.04	0.06	0.18	0.20	-0.09	-0.07

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of the standardized 2nd grade test scores in reading for the child on weight classification. Covariates are measured at age 5 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.44 Standardized test score in 2<sup>nd</sup> grade reading, SES**

	Low SES – education		High SES – education	
	OLS	FE	OLS	FE
Underweight	0.03** (0.02)	-0.02 (0.04)	0.01** (0.01)	-0.01 (0.01)
Overweight	-0.06*** (0.01)	-0.01 (0.03)	-0.11*** (0.01)	-0.01 (0.02)
Obese	-0.20*** (0.02)	-0.08 (0.05)	-0.24*** (0.02)	-0.01 (0.04)
N	58,957	18,985	200,711	78,185
R-squared	0.092	0.655	0.069	0.664
Adjusted R-squared	0.091	0.331	0.068	0.343
Number of clusters		9,155		38,113
Mean of normal weight	-0.29	-0.30	0.13	0.15

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of the standardized 2nd grade test scores in reading for the child on weight classification. Covariates are measured at age 5 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.45 Standardized test score in 3<sup>rd</sup> grade math**

	All		Girls		Boys	
	OLS	FE	OLS	FE	OLS	FE
Underweight	0.01* (0.01)	-0.01 (0.01)	-0.00 (0.01)	-0.02 (0.03)	0.02** (0.01)	0.00 (0.03)
Overweight	-0.11*** (0.01)	-0.02 (0.01)	-0.10*** (0.01)	-0.02 (0.03)	-0.12*** (0.01)	-0.02 (0.03)
Obese	-0.21*** (0.01)	-0.05 (0.03)	-0.21*** (0.02)	-0.02 (0.05)	-0.22*** (0.02)	-0.07 (0.07)
N	256,596	97,978	125,925	24,939	130,671	27,185
R-squared	0.086	0.658	0.094	0.674	0.079	0.662
Adjusted R-squared	0.086	0.334	0.094	0.356	0.079	0.332
Number of clusters		47,671		12,276		13,389
Mean of normal weight	0.05	0.09	0.05	0.10	0.04	0.09

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of the standardized 3rd grade test scores in mathematics for the child on weight classification. Covariates are measured at age 5 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.46 Standardized test score in 3<sup>rd</sup> grade math, SES**

	Low SES – education		High SES – education	
	OLS	FE	OLS	FE
Underweight	0.00 (0.02)	-0.04 (0.04)	0.01* (0.01)	-0.01 (0.02)
Overweight	-0.08*** (0.01)	-0.10*** (0.03)	-0.12*** (0.01)	0.01 (0.02)
Obese	-0.18*** (0.02)	-0.13** (0.05)	-0.23*** (0.02)	-0.02 (0.04)
N	58,389	18,676	198,207	76,904
R-squared	0.070	0.637	0.051	0.650
Adjusted R-squared	0.069	0.293	0.051	0.316
Number of clusters		9,019		37,496
Mean of normal weight	-0.29	-0.27	0.14	0.18

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of the standardized 3rd grade test scores in math for the child on weight classification. Covariates are measured at age 5 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.47 4<sup>th</sup> grade school absence**

	All		Girls		Boys	
	OLS	FE	OLS	FE	OLS	FE
Underweight	0.08* (0.04)	0.06 (0.08)	0.16*** (0.05)	0.37*** (0.13)	-0.01 (0.06)	-0.21 (0.15)
Overweight	0.36*** (0.04)	0.01 (0.08)	0.37*** (0.05)	0.17 (0.13)	0.34*** (0.06)	-0.08 (0.15)
Obese	1.39*** (0.09)	0.34* (0.17)	1.21*** (0.10)	0.34 (0.30)	1.67*** (0.15)	0.18 (0.38)
N	257,073	97,957	125,073	24,558	132,000	27,592
R-squared	0.055	0.662	0.057	0.673	0.053	0.675
Adjusted R-squared	0.055	0.341	0.057	0.353	0.053	0.358
Number of clusters		47,625		12,088		13,582
Mean of normal weight	5.12	4.75	4.94	4.56	5.27	4.89

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of total 4th grade school absence for the child on weight classification. Covariates are measured at age 5 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.



**Table 1.48 4<sup>th</sup> grade school absence, SES**

	Low SES – education		High SES – education	
	OLS	FE	OLS	FE
Underweight	0.08 (0.10)	0.21 (0.19)	0.08* (0.04)	0.04 (0.08)
Overweight	0.40*** (0.08)	-0.01 (0.18)	0.33*** (0.04)	0.01 (0.08)
Obese	1.56*** (0.15)	0.59* (0.31)	1.27*** (0.11)	0.17 (0.21)
N	59,904	19,506	197,169	76,015
R-squared	0.049	0.687	0.038	0.646
Adjusted R-squared	0.048	0.392	0.038	0.308
Number of clusters		9,402		37,050
Mean of normal weight	6.28	5.87	4.79	4.47

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of total 4th grade school absence for the child on weight classification. Covariates are measured at age 5 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

## Tables on well-being

**Table 1.49 Bullying**

	All		Girls		Boys	
	OLS	FE	OLS	FE	OLS	FE
Underweight	-0.93*** (0.24)	-0.83 (0.62)	-1.09*** (0.34)	-1.07 (1.24)	-0.75** (0.35)	-1.98* (1.15)
Overweight	3.36*** (0.26)	1.88*** (0.65)	3.25*** (0.35)	-0.63 (1.19)	3.46*** (0.39)	1.21 (1.35)
Obese	6.66*** (0.55)	3.00** (1.43)	6.66*** (0.72)	2.18 (2.67)	6.49*** (0.85)	1.45 (3.22)
N	228,872	79,551	111,512	19,919	117,360	22,352
R-squared	0.017	0.529	0.020	0.541	0.016	0.545
Adjusted R-squared	0.017	0.080	0.019	0.091	0.015	0.098
Number of clusters		38,779		9,818		11,020
Mean of normal weight	12.20	11.19	12.15	11.11	12.25	10.85

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of an indicator for whether the child has experienced bullying or not on weight classification. Covariates are measured at age 5 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.50 Bullying, by SES**

	Low SES – education		High SES – education	
	OLS	FE	OLS	FE
Underweight	-1.83*** (0.60)	-1.20 (1.67)	-0.68** (0.26)	-0.93 (0.66)
Overweight	2.17*** (0.53)	1.31 (1.45)	3.80*** (0.30)	2.36*** (0.74)
Obese	5.24*** (0.90)	4.17 (2.63)	7.55*** (0.69)	2.62 (1.72)
N	52,030	15,075	176,842	62,537
R-squared	0.015	0.530	0.011	0.527
Adjusted R-squared	0.014	0.082	0.011	0.074
Number of clusters		7,302		30,539

	Low SES – education		High SES – education	
	OLS	FE	OLS	FE
Mean of normal weight	16.82	15.53	10.93	10.14

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of an indicator for whether the child has experienced bullying or not on weight classification. Covariates are measured at age 5 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.51 Loneliness**

	All		Girls		Boys	
	OLS	FE	OLS	FE	OLS	FE
Underweight	-0.22 (0.18)	0.47 (0.43)	-0.38 (0.27)	0.39 (0.90)	-0.05 (0.24)	0.81 (0.74)
Overweight	1.45*** (0.19)	0.03 (0.48)	1.78*** (0.27)	-0.58 (0.97)	0.98*** (0.26)	0.40 (0.87)
Obese	2.54*** (0.40)	2.31** (1.01)	2.19*** (0.54)	3.72* (2.04)	2.94*** (0.59)	3.32* (2.00)
N	233,507	82,437	114,440	20,859	119,067	22,908
R-squared	0.010	0.519	0.010	0.527	0.007	0.535
Adjusted R-squared	0.009	0.060	0.009	0.063	0.007	0.079
Number of clusters		40,170		10,274		11,287
Mean of normal weight	5.94	5.46	6.97	6.43	5.00	4.25

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of an indicator for whether the child has experienced loneliness or not on weight classification. Covariates are measured at age 5 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.52 Loneliness, by SES**

	Low SES – education		High SES – education	
	OLS	FE	OLS	FE
Underweight	-0.92** (0.44)	0.18 (1.19)	-0.02 (0.19)	0.40 (0.46)

	Low SES – education		High SES – education	
Overweight	1.42*** (0.39)	0.42 (1.10)	1.44*** (0.21)	-0.31 (0.54)
Obese	2.15*** (0.66)	2.67 (1.85)	2.83*** (0.50)	2.18* (1.23)
N	53,259	15,687	180,248	64,723
R-squared	0.011	0.515	0.006	0.519
Adjusted R-squared	0.010	0.053	0.006	0.059
Number of clusters		7,595		31,596
Mean of normal weight	8.15	7.87	5.33	4.90

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of an indicator for whether the child has experienced loneliness or not on weight classification. Covariates are measured at age 5 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.53 Confidence**

	All		Girls		Boys	
	OLS	FE	OLS	FE	OLS	FE
Underweight	0.81** (0.34)	0.69 (0.82)	1.23*** (0.46)	2.29 (1.57)	0.39 (0.50)	1.49 (1.56)
Overweight	-1.89*** (0.33)	1.14 (0.83)	-2.25*** (0.43)	-0.31 (1.55)	-1.45*** (0.50)	2.58 (1.72)
Obese	-2.70*** (0.63)	1.53 (1.74)	-3.06*** (0.82)	4.48 (3.25)	-2.22** (1.00)	2.93 (3.72)
N	227,816	78,830	112,044	20,157	115,772	21,768
R-squared	0.019	0.546	0.019	0.554	0.018	0.557
Adjusted R-squared	0.019	0.112	0.018	0.116	0.017	0.123
Number of clusters		38,436		9,933		10,728
Mean of normal weight	72.91	74.05	74.60	75.61	71.37	72.71

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of an indicator for whether the child academically confident or not on weight classification. Covariates are measured at age 5 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.54 Confidence, by SES**

	Low SES – education		High SES – education	
	OLS	FE	OLS	FE
Underweight	0.86 (0.79)	0.48 (2.04)	0.78** (0.37)	0.77 (0.90)
Overweight	-0.98 (0.64)	-1.07 (1.73)	-2.17*** (0.38)	1.69* (0.97)
Obese	-0.25 (1.02)	-2.49 (3.04)	-4.25*** (0.81)	3.19 (2.17)
N	51,377	14,721	176,439	62,209
R-squared	0.015	0.551	0.015	0.543
Adjusted R-squared	0.014	0.123	0.014	0.105
Number of clusters		7,139		30,381
Mean of normal weight	66.80	67.66	74.58	75.59

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of an indicator for whether the child academically confident or not on weight classification. Covariates are measured at age 5 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.55 Self-efficacy**

	All		Girls		Boys	
	OLS	FE	OLS	FE	OLS	FE
Underweight	-0.41 (0.31)	-0.18 (0.77)	-0.61 (0.44)	-0.15 (1.49)	-0.18 (0.44)	-1.13 (1.49)
Overweight	-1.85*** (0.30)	2.19*** (0.77)	-2.10*** (0.41)	1.07 (1.46)	-1.52*** (0.45)	3.91** (1.56)
Obese	-2.44*** (0.59)	3.27** (1.64)	-2.24*** (0.78)	3.04 (3.00)	-2.68*** (0.93)	2.52 (3.76)
N	225,736	77,780	111,075	19,846	114,661	21,407
R-squared	0.016	0.530	0.017	0.538	0.015	0.544
Adjusted R-squared	0.016	0.081	0.016	0.084	0.015	0.095
Number of clusters		37,947		9,783		10,559
Mean of normal weight	79.94	80.75	79.80	81.01	80.07	80.66

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of an indicator for whether the child has self-efficacy or not on weight classification. Covariates are measured at age 5 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.56 Self-efficacy, by SES**

	Low SES – education		High SES – education	
	OLS	FE	OLS	FE
Underweight	-0.92 (0.75)	-0.53 (1.99)	-0.28 (0.34)	0.23 (0.84)
Overweight	-0.83 (0.60)	3.12* (1.74)	-2.20*** (0.35)	1.81** (0.86)
Obese	-1.98** (0.99)	-0.17 (3.05)	-2.64*** (0.74)	5.28*** (1.96)
N	50,756	14,399	174,980	61,490
R-squared	0.011	0.524	0.011	0.530
Adjusted R-squared	0.010	0.070	0.010	0.080
Number of clusters		6,986		30,045
Mean of normal weight	74.15	74.36	81.51	82.26

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of an indicator for whether the child has self-efficacy or not on weight classification. Covariates are measured at age 5 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

## Tables on health

**Table 1.57 Visiting a general practitioner at age 10**

	All		Girls		Boys	
	OLS	FE	OLS	FE	OLS	FE
Underweight	-1.62*** (0.30)	-0.76 (0.66)	-2.00*** (0.41)	-0.22 (1.29)	-1.24*** (0.43)	-4.09*** (1.29)
Overweight	2.83*** (0.26)	1.53** (0.62)	2.82*** (0.35)	1.91 (1.17)	2.82*** (0.40)	1.22 (1.32)
Obese	4.77*** (0.47)	2.86** (1.23)	4.74*** (0.62)	4.79** (2.25)	4.77*** (0.73)	2.46 (2.71)
N	317,246	125,240	154,913	31,608	162,333	35,110
R-squared	0.016	0.560	0.016	0.573	0.016	0.570
Adjusted R-squared	0.016	0.145	0.016	0.156	0.016	0.152
Number of clusters		60,815		15,549		17,267
Mean of normal weight	71.77	70.89	72.77	71.88	70.86	69.93

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of an indicator for whether the child has visited a general practitioner at age 10 or not on weight classification. Covariates are measured at age 5 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.58 Visiting a general practitioner at age 10, by SES**

	Low SES – education		High SES – education	
	OLS	FE	OLS	FE
Underweight	-0.78 (0.64)	-1.63 (1.50)	-1.85*** (0.34)	-0.71 (0.75)
Overweight	1.82*** (0.49)	0.35 (1.22)	3.19*** (0.31)	1.93*** (0.73)
Obese	3.43*** (0.76)	2.72 (2.05)	5.55*** (0.61)	2.26 (1.60)
N	72,899	24,719	244,347	97,343
R-squared	0.022	0.563	0.015	0.561
Adjusted R-squared	0.021	0.154	0.015	0.143
Number of clusters		11,882		47,403

	Low SES – education		High SES – education	
	OLS	FE	OLS	FE
Mean of normal weight	72.75	72.17	71.49	70.53

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of an indicator for whether the child has visited a general practitioner at age 10 or not on weight classification. Covariates are measured at age 5 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.59 Primary sector costs at age 10**

	All		Girls		Boys	
	OLS	FE	OLS	FE	OLS	FE
Underweight	-0.02** (0.01)	0.03 (0.02)	-0.04*** (0.01)	-0.01 (0.04)	0.01 (0.01)	0.07 (0.04)
Overweight	0.09*** (0.01)	0.07*** (0.02)	0.11*** (0.01)	0.05 (0.04)	0.07*** (0.01)	0.03 (0.04)
Obese	0.18*** (0.01)	0.15*** (0.04)	0.18*** (0.02)	0.09 (0.08)	0.17*** (0.02)	0.02 (0.10)
N	240,635	75,258	119,087	19,367	121,548	20,466
R-squared	0.019	0.567	0.020	0.587	0.018	0.572
Adjusted R-squared	0.018	0.152	0.019	0.179	0.017	0.152
Number of clusters		36,804		9,558		10,098
Mean of normal weight	6.13	6.17	6.16	6.22	6.11	6.14

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of primary sector costs of the child on weight classification. Dependent variable is log-transformed. Covariates are measured at age 5 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.60 Primary sector costs at age 10, by SES**

	Low SES – education		High SES – education	
	OLS	FE	OLS	FE
Underweight	-0.01 (0.02)	0.03 (0.05)	-0.02** (0.01)	0.03 (0.03)



	Low SES – education		High SES – education	
Overweight	0.08*** (0.01)	0.04 (0.04)	0.10*** (0.01)	0.08*** (0.02)
Obese	0.17*** (0.02)	0.20*** (0.07)	0.18*** (0.02)	0.13** (0.06)
N	55,707	15,292	184,928	57,986
R-squared	0.020	0.571	0.018	0.567
Adjusted R-squared	0.019	0.162	0.018	0.150
Number of clusters		7,408		28,438
Mean of normal weight	6.17	6.22	6.12	6.15

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of primary sector costs of the child on weight classification. Covariates are measured at age 5 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.61 Hospital contact at age 10**

	All		Girls		Boys	
	OLS	FE	OLS	FE	OLS	FE
Underweight	-0.51* (0.26)	0.48 (0.62)	-0.85** (0.37)	2.82** (1.20)	-0.14 (0.38)	-2.39** (1.20)
Overweight	2.96*** (0.26)	2.98*** (0.61)	3.43*** (0.35)	1.86 (1.16)	2.36*** (0.39)	3.20** (1.25)
Obese	7.59*** (0.50)	5.73*** (1.30)	8.54*** (0.67)	0.90 (2.31)	6.29*** (0.76)	14.00*** (2.83)
N	317,246	125,240	154,913	31,608	162,333	35,110
R-squared	0.097	0.562	0.098	0.577	0.097	0.567
Adjusted R-squared	0.097	0.147	0.098	0.165	0.096	0.146
Number of clusters		60,815		15,549		17,267
Mean of normal weight	24.30	23.65	24.10	23.79	24.47	23.87

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of an indicator for whether the child has had a hospital contact at age 10 or not on weight classification. Covariates are measured at age 5 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.62 Hospital contact at age, by SES**

	Low SES – education		High SES – education	
	OLS	FE	OLS	FE
Underweight	0.74 (0.59)	0.42 (1.46)	-0.84*** (0.30)	0.53 (0.69)
Overweight	2.97*** (0.49)	2.87** (1.23)	2.94*** (0.30)	2.97*** (0.72)
Obese	7.65*** (0.80)	4.08* (2.19)	7.52*** (0.65)	6.75*** (1.68)
N	72,899	24,719	244,347	97,343
R-squared	0.095	0.562	0.098	0.562
Adjusted R-squared	0.094	0.154	0.098	0.146
Number of clusters		11,882		47,403
Mean of normal weight	24.75	24.37	24.17	23.48

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of an indicator for whether the child has had a hospital contact at age 10 or not on weight classification. Covariates are measured at age 5 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.63 Secondary sector costs at age 10**

	All		Girls		Boys	
	OLS	FE	OLS	FE	OLS	FE
Underweight	0.03* (0.02)	-0.03 (0.08)	0.05* (0.03)	-0.03 (0.14)	0.02 (0.03)	0.01 (0.15)
Overweight	0.07*** (0.02)	0.01 (0.07)	0.07*** (0.02)	0.06 (0.13)	0.08*** (0.02)	-0.02 (0.14)
Obese	0.25*** (0.03)	0.39*** (0.14)	0.30*** (0.04)	0.64*** (0.23)	0.18*** (0.04)	0.13 (0.32)
N	78,849	9,085	38,431	2,366	40,418	2,544
R-squared	0.034	0.551	0.038	0.605	0.032	0.555
Adjusted R-squared	0.033	0.100	0.036	0.182	0.031	0.078
Number of clusters		4,506		1,176		1,269
Mean of normal weight	7.89	7.95	7.87	7.98	7.91	7.98

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of total hospital costs of the child at age 10 on weight classification. Covariates are measured at age 5 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

**Table 1.64 Secondary sector costs at age, by SES**

	Low SES – education		High SES – education	
	OLS	FE	OLS	FE
Underweight	0.04 (0.04)	-0.21 (0.16)	0.03 (0.02)	-0.00 (0.09)
Overweight	0.08*** (0.03)	0.10 (0.15)	0.07*** (0.02)	-0.02 (0.08)
Obese	0.22*** (0.04)	0.30 (0.23)	0.27*** (0.03)	0.48*** (0.17)
N	18,701	2,033	60,148	6,842
R-squared	0.039	0.562	0.033	0.556
Adjusted R-squared	0.036	0.093	0.032	0.106
Number of clusters		1,006		3,397
Mean of normal weight	7.89	7.98	7.89	7.94

Notes: The table shows covariate-adjusted estimation coefficients and standard errors (in parentheses) from OLS and sibling FE regressions of total hospital costs of the child at age 10 on weight classification. Covariates are measured at age 5 or earlier (see Appendix Table 1.2 for a full description of included variables). We apply robust standard errors in the OLS estimations and family-clustered standard errors in the sibling FE estimations. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Source: VIVE.

