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ASSOCIATIONS BETWEEN FAMILY AND PARENTAL FACTORS AND CHILDHOOD OBESITY

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ASSOCIATIONS BETWEEN FAMILY AND PARENTAL FACTORS AND CHILDHOOD OBESITY

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Outline

- ▶ Background
- ▶ Method
- ▶ Results
- ▶ Discussion
- ▶ Conclusion
- ▶ References

Background

- ▶ Obesity is a complex health issue
- ▶ Childhood obesity is particularly worrying physically and mentally as well as perennially.
- ▶ About 19% of U.S. children (2-19 years) are obese
- ▶ About 40% of overweight children will continue to be overweight during adolescence
- ▶ About 80% of obese adolescents will become obese adults.

Method

- ▶ Data source:- National Survey for Child Health (2013-2015)
- ▶ Total of 42,121 subjects

Multiple logistic regression

Predictors

- ▶ Access to State Children's Health Insurance (SCHIP)
- ▶ Low birth weight (LBW)
- ▶ Poverty
- ▶ Family size
- ▶ Region of residence
- ▶ Age
- ▶ Sex
- ▶ Race

Important Terminologies

Variables	Definition
Childhood obesity	BMI at or above 95 th percentile for a specific age and sex
LBW	Birth weight of an infant of less than 2,500 grams
SCHIP	A program administered by the United States Department of Health and Human Services, providing funds for health insurance to families with children

Results- Descriptive Statistics

Sex				
SEX	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Male	19789	51.36	19789	51.36
Female	18742	48.64	38531	100.00
Frequency Missing = 3590				

Whether or not anyone in family had SCHIP				
SCHIP	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	39812	94.52	39812	94.52
Yes	2309	5.48	42121	100.00

Obese	Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	10809	83.84	10809	83.84
2	2083	16.16	12892	100.00
Frequency Missing = 29229				

Region				
REGION	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Northeast	3981	15.20	3981	15.20
Midwest	5101	19.47	9082	34.67
South	9475	36.17	18557	70.84
West	7640	29.16	26197	100.00
Frequency Missing = 15924				

Whether or not under poverty threshold				
POVERTY	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	30718	78.86	30718	78.86
Yes	8233	21.14	38951	100.00
Frequency Missing = 3170				

Results

Table of Obese by SCHIP			
Obese	SCHIP(Whether or not anyone in family had SCHIP)		
	No	Yes	Total
1	10282	527	10809
	79.75	4.09	83.84
	95.12	4.88	
	83.97	81.45	
2	1963	120	2083
	15.23	0.93	16.16
	94.24	5.76	
	16.03	18.55	
Total	12245	647	12892
	94.98	5.02	100.00
Frequency Missing = 29229			

Table of Obese by POVERTY			
Obese	POVERTY(Whether or not under poverty threshold)		
	No	Yes	Total
1	8540	1716	10256
	69.85	14.03	83.88
	83.27	16.73	
	85.01	78.68	
2	1506	465	1971
	12.32	3.80	16.12
	76.41	23.59	
	14.99	21.32	
Total	10046	2181	12227
	82.16	17.84	100.00
Frequency Missing = 29894			

Table of Obese by REGION					
Obese	REGION(Region)				
	Northeast	Midwest	South	West	Total
1	1189	1442	2551	2193	7375
	13.58	16.47	29.14	25.05	84.24
	16.12	19.55	34.59	29.74	
	86.66	83.89	82.64	85.10	
2	183	277	536	384	1380
	2.09	3.16	6.12	4.39	15.76
	13.26	20.07	38.84	27.83	
	13.34	16.11	17.36	14.90	
Total	1372	1719	3087	2577	8755
	15.67	19.63	35.26	29.43	100.00
Frequency Missing = 33366					

Results

Predictors	OR Estimate (CL)		p-values
Region: Midwest vs South	0.854	(0.850, 0.859)	< 0.0001
Northeast vs South	0.644	(0.639, 0.648)	< 0.0001
West vs South	0.860	(0.855, 0.864)	< 0.0001
Race: African American vs White	1.265	(1.257, 1.272)	< 0.0001
Native American vs White	1.035	(1.012, 1.059)	0.0031
Asian vs White	0.487	(0.480, 0.494)	< 0.0001
Others vs White	1.585	(1.570, 1.599)	< 0.0001
Sex: Male vs Female	1.597	(1.590, 1.604)	< 0.0001
Age	0.959	(0.958, 0.960)	< 0.0001
Family children number	0.877	(0.875, 0.879)	< 0.0001
SCHIP Yes vs No	0.976	(0.967, 0.985)	< 0.0001
Poverty Yes vs No	1.576	(1.568, 1.585)	< 0.0001
Low birth weight Yes vs No	0.971	(0.963, 0.978)	< 0.0001
Emotional status: Positive	1.454	(1.440, 1.473)	< 0.0001

Discussion

- ▶ Male children were shown to be more likely to be obese than female children
 - ▶ Why is this the case?
- ▶ State Children's Health Insurance Program (SCHIP) was shown to have a significant effect on the odds of obesity
 - ▶ How is SCHIP associated with childhood obesity?
 - ▶ Could Social Economic Status (SES) be a confounder?

Conclusion

- ▶ The home environment has a huge impact on childhood obesity.
- ▶ Further studies are needed to understand how much of this influence is as a result of genetic factors.

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