

Understanding the Development of Child Obesity: Evidence from Growing Up in Ireland

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Growing Up in Ireland Study



- The National Longitudinal Study of Children:
 - Funded by the Government of Ireland through the Dept. of Children and Youth Affairs
 - Infant Cohort:
 - 9 months (2008-9) 11,134 children (65% response rate)
 - 3 years (2010-11) 9738 children (85% response rate)
 - 5 years (Completion by August 2013)
 - Child Cohort
 - 9 years (2007-8) 8,568 children (57% response rate; 82% schools)
 - 13 yrs (2012) 7,400 young people (86% response rate)

Growing Up in Ireland Study



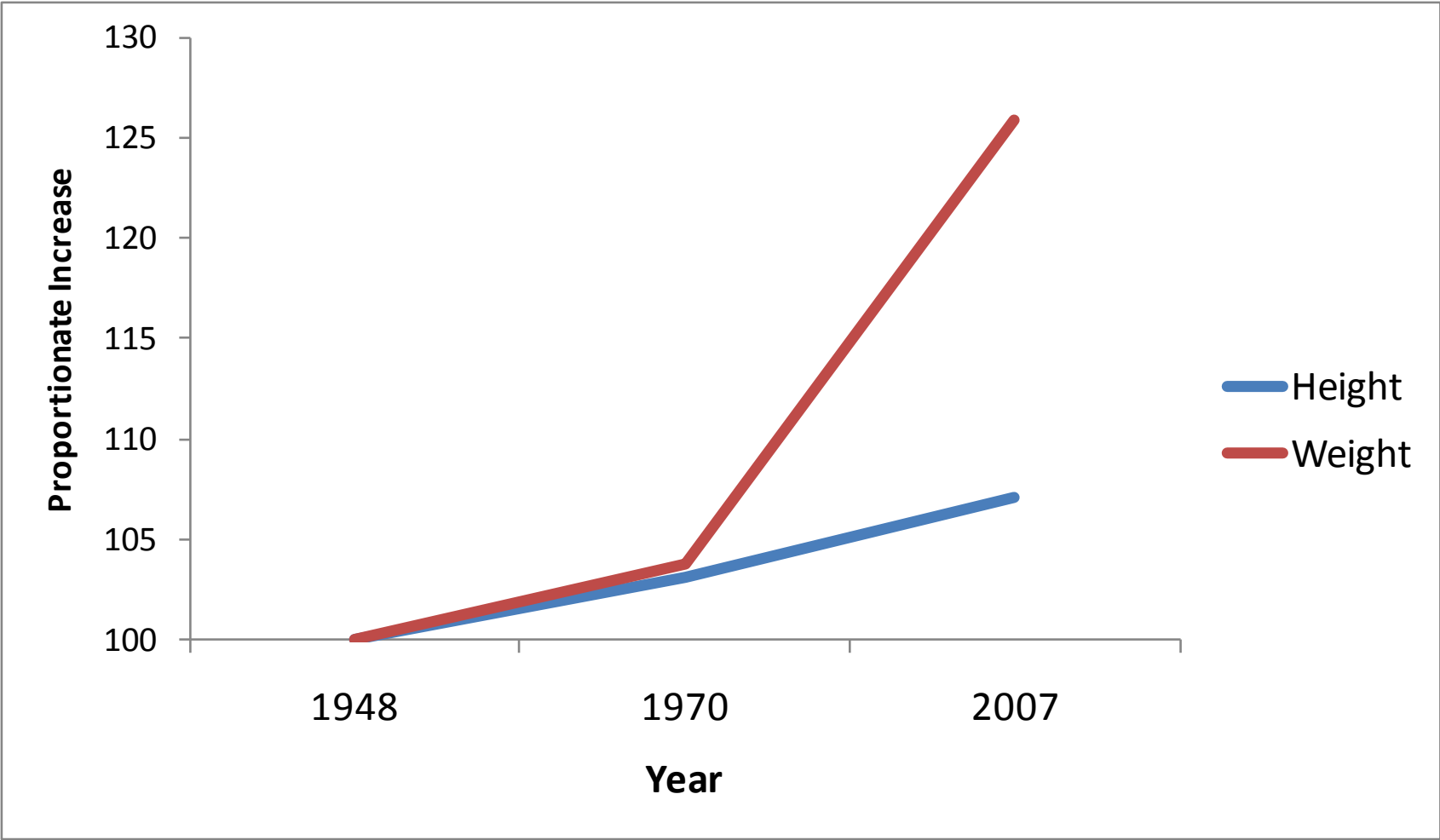
- Parent (resident and non-resident), child and carer interviews + self-completion
- Measured heights and weights
- Large number of domains
- Time use survey
- Valuable data on cross-sectional patterns and risk factors
- Longitudinal data provide evidence of developmental pathways and processes

Obesity Trends in Ireland



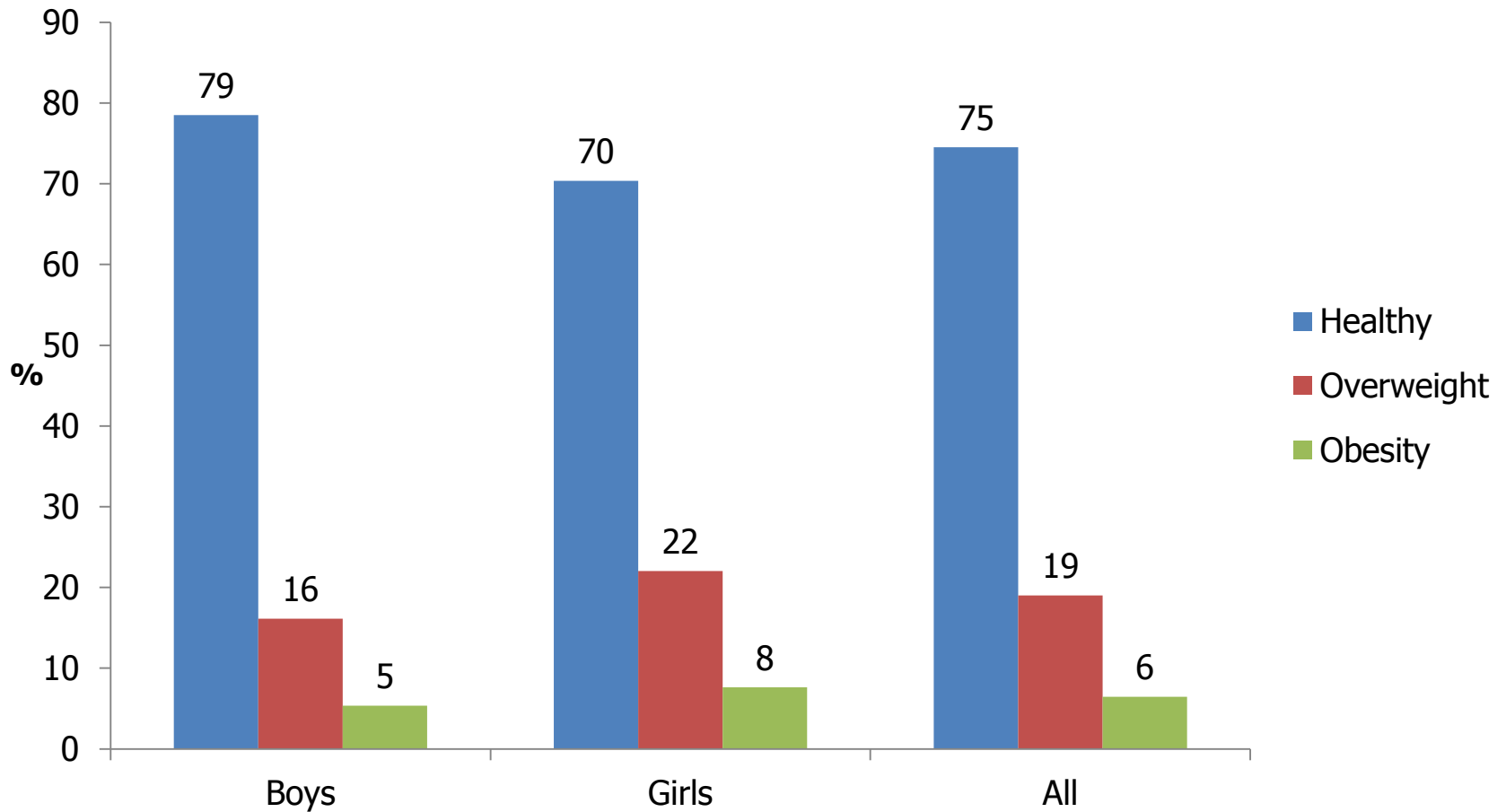
- Child and adolescent obesity have increased internationally
- Irish trend data are limited
- Irish data suggest substantial increases since 70's
- Average height for boys has increased by 7% between 1948 and 2007
- Average weight has increased by 26%

Height/Weight Trends

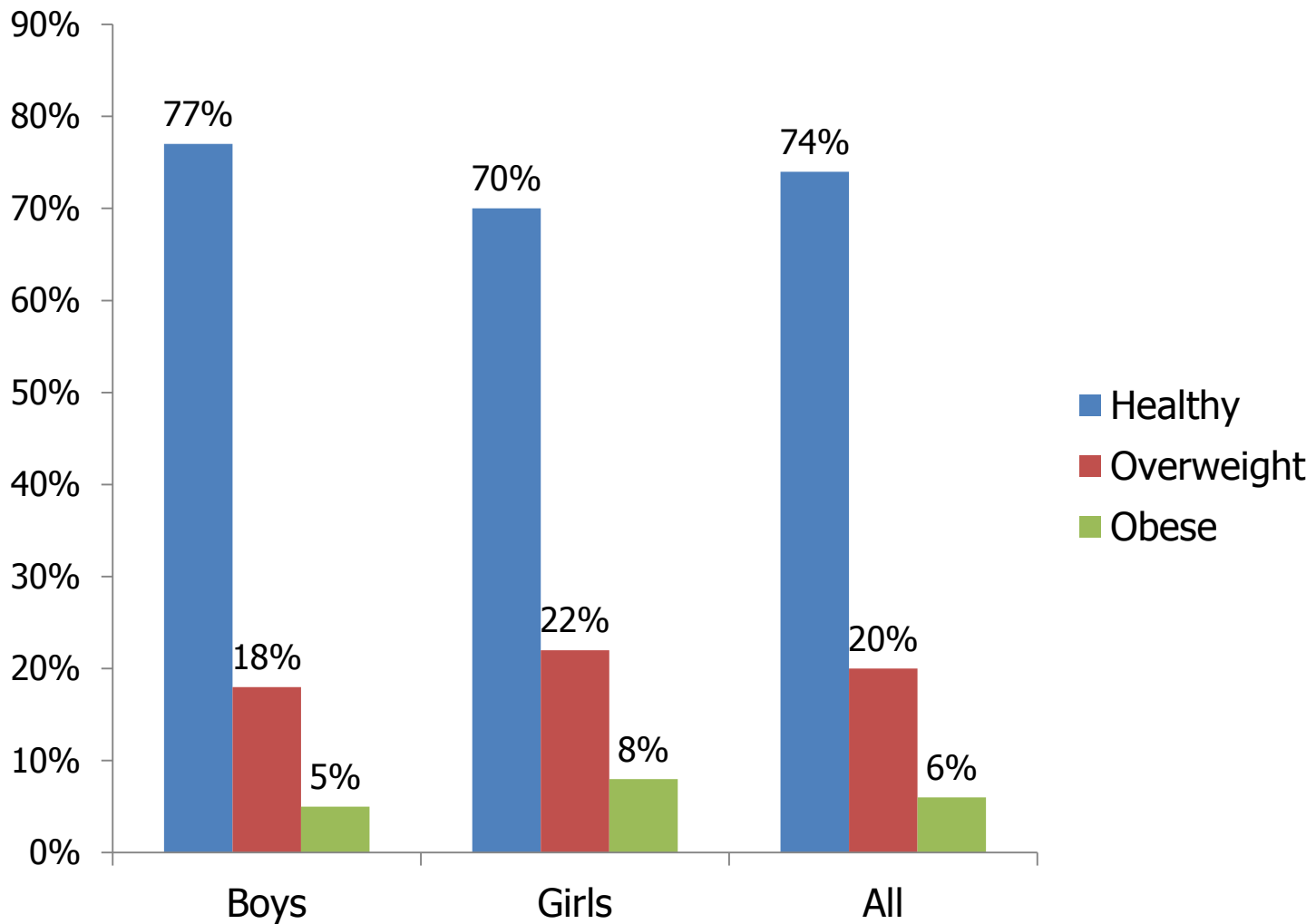


1948 and 1970 data from Perry et al 2006

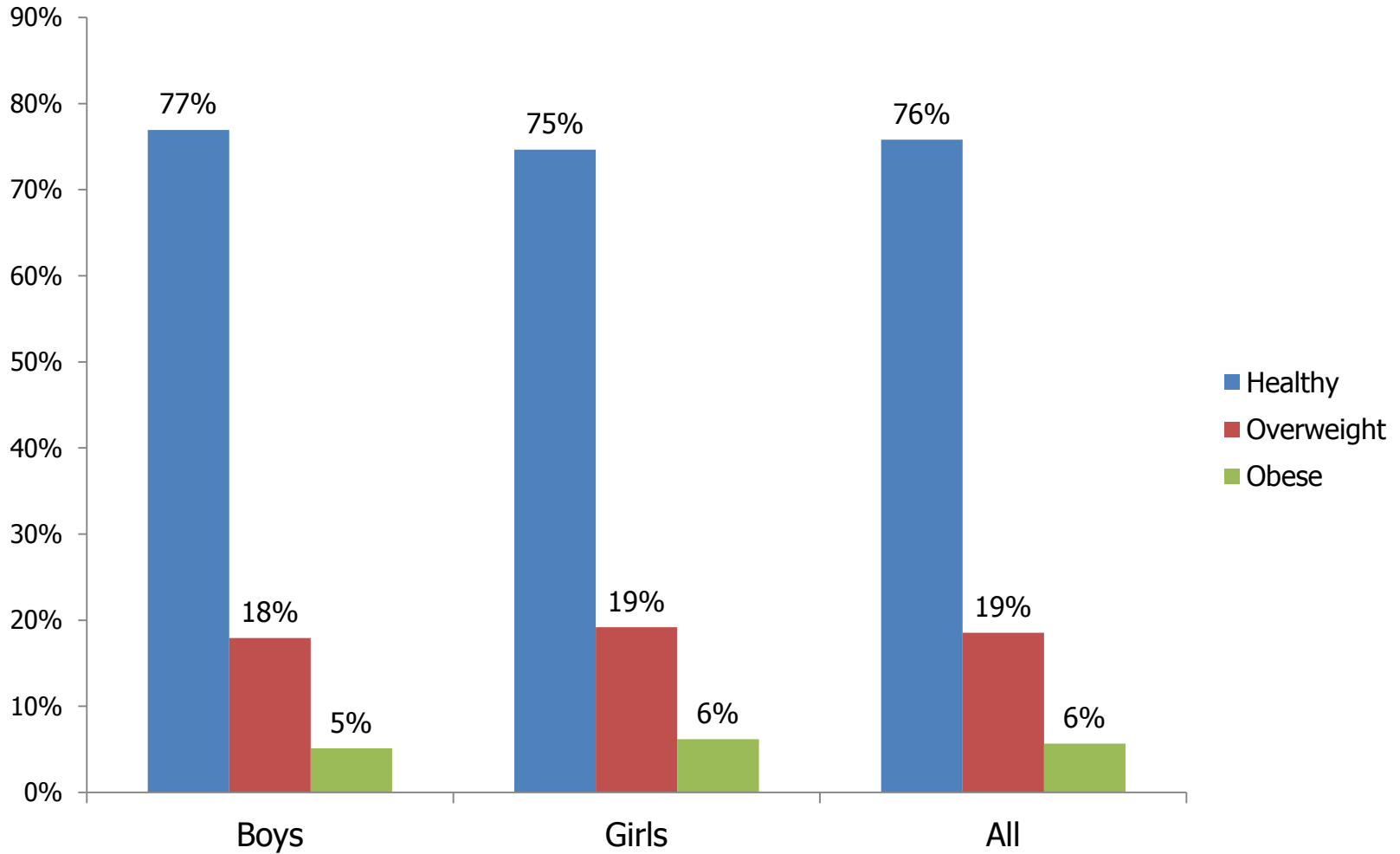
Prevalence – Child Cohort Wave 1 (Age 9)



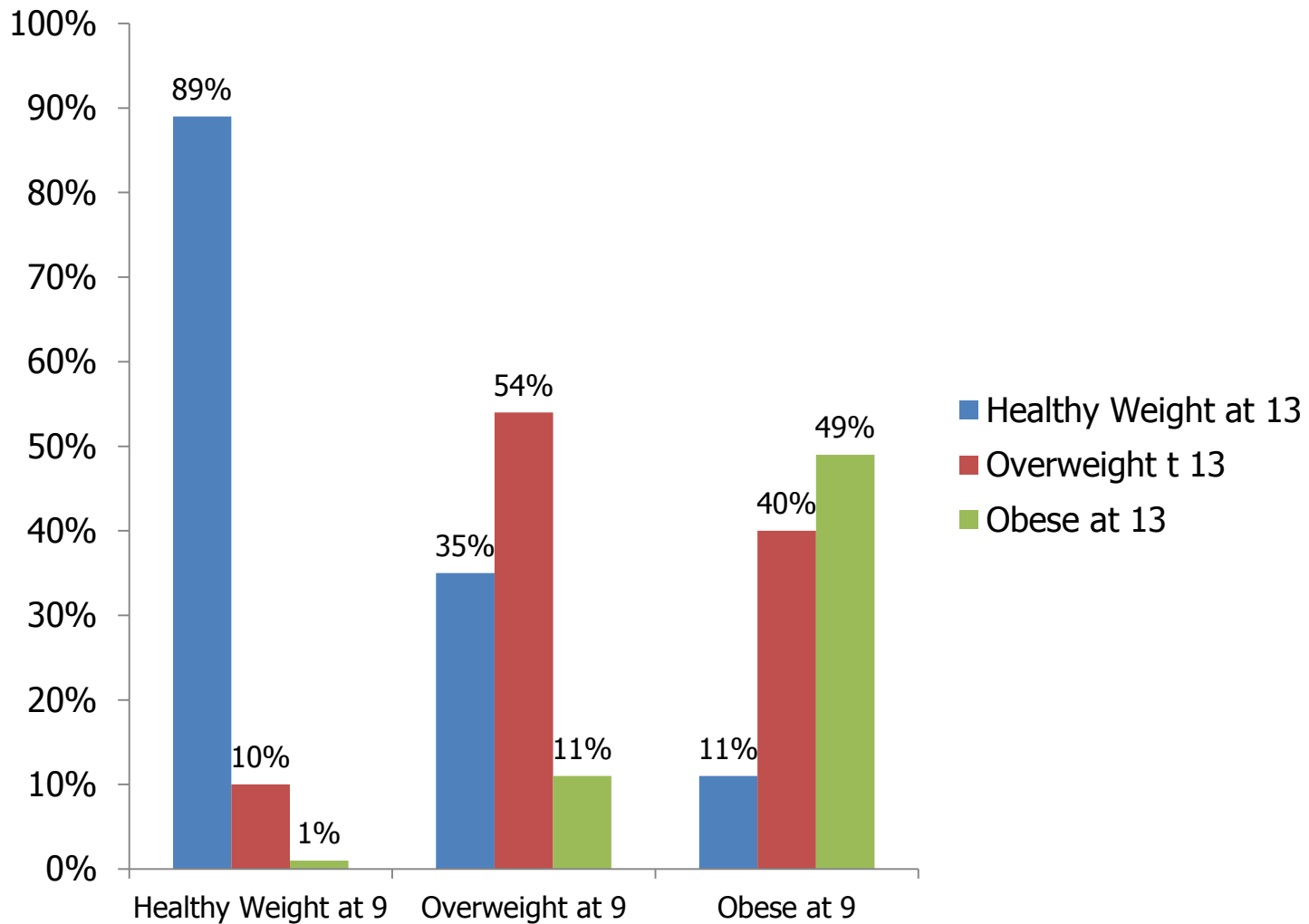
Overweight and Obesity at 13



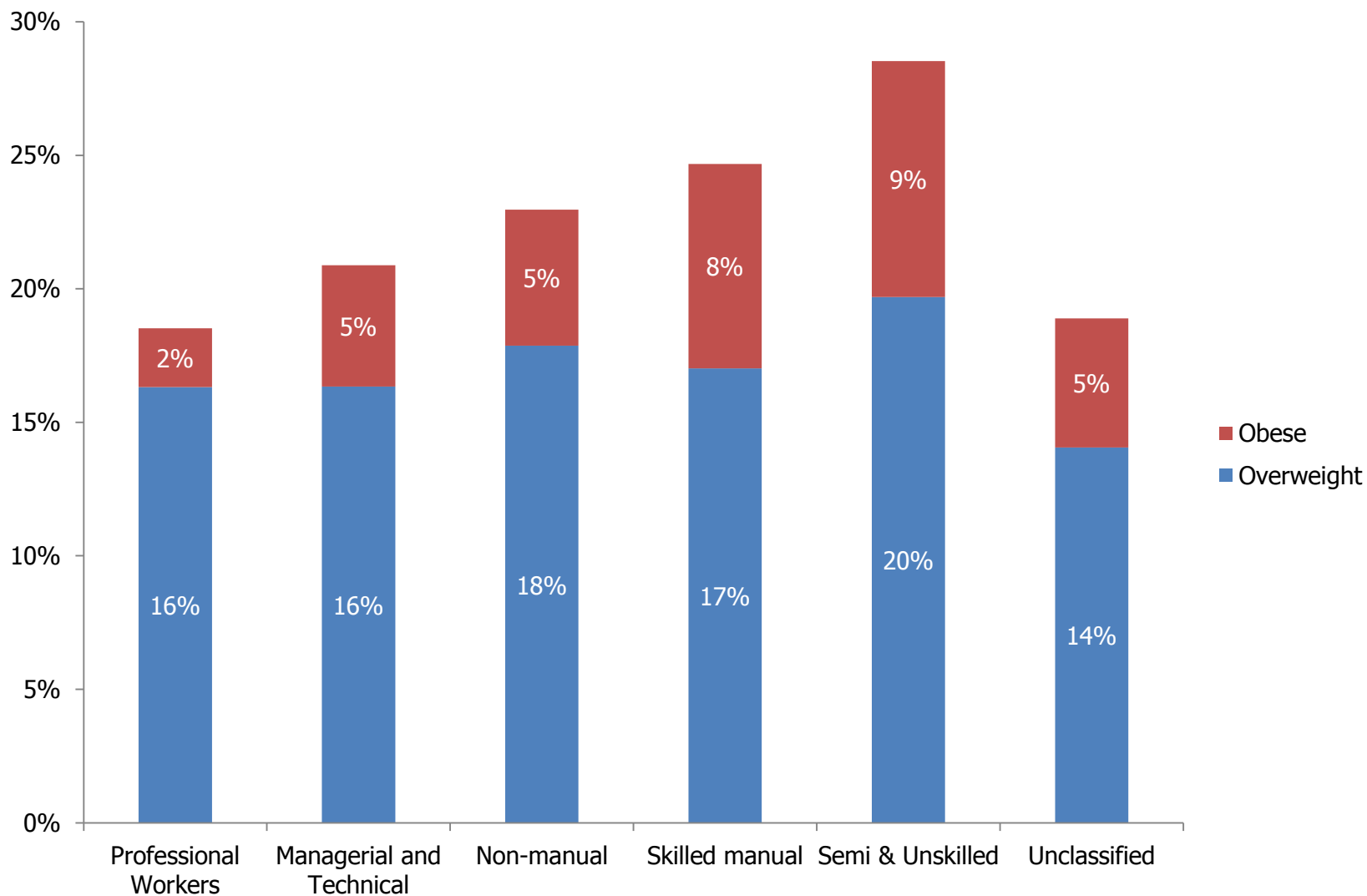
Prevalence – Infant Cohort Wave 2 (Age 3)



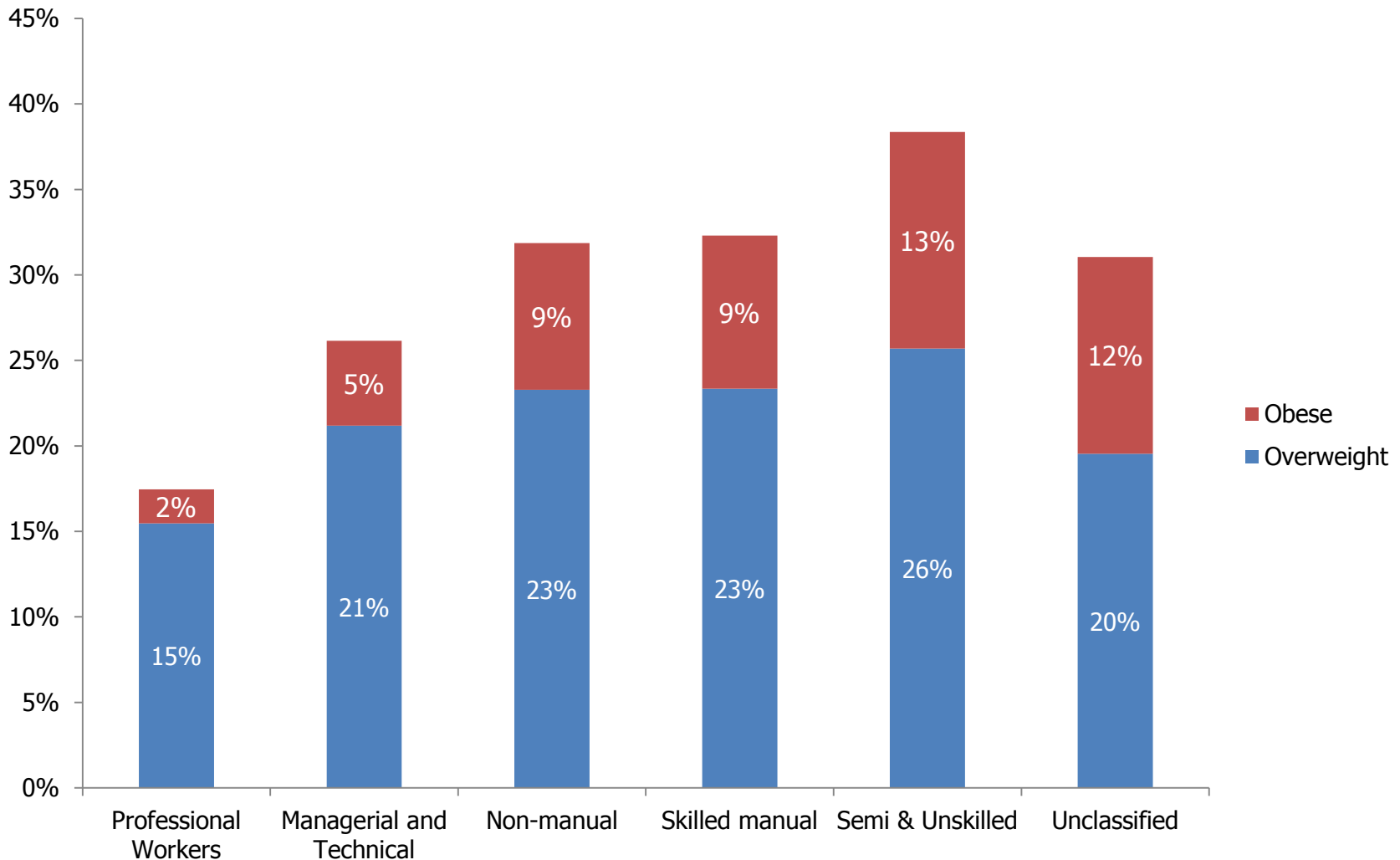
Weight Status at 13 by Weight Status at 9



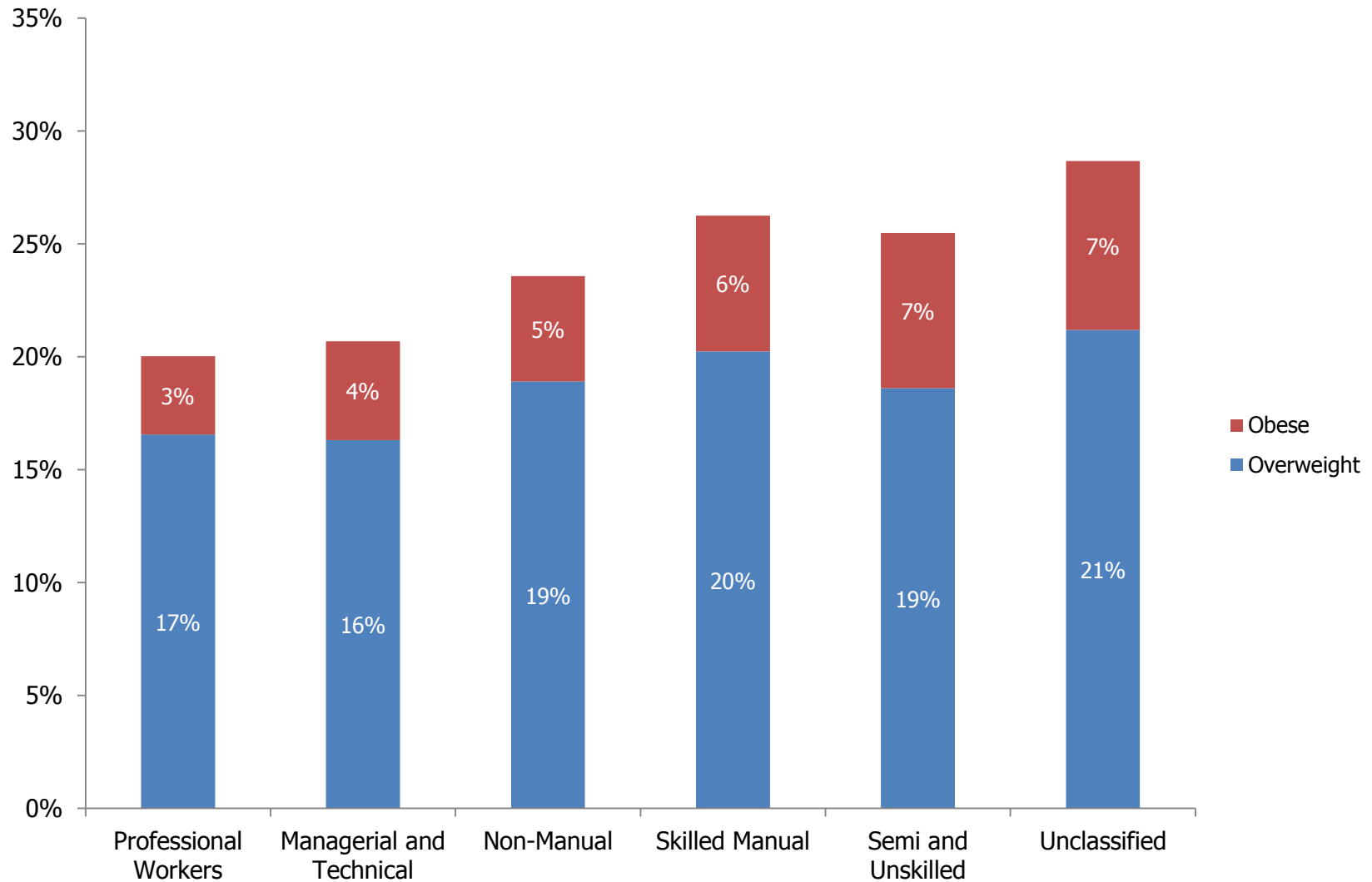
Prevalence by Social Class – Boys Age 9



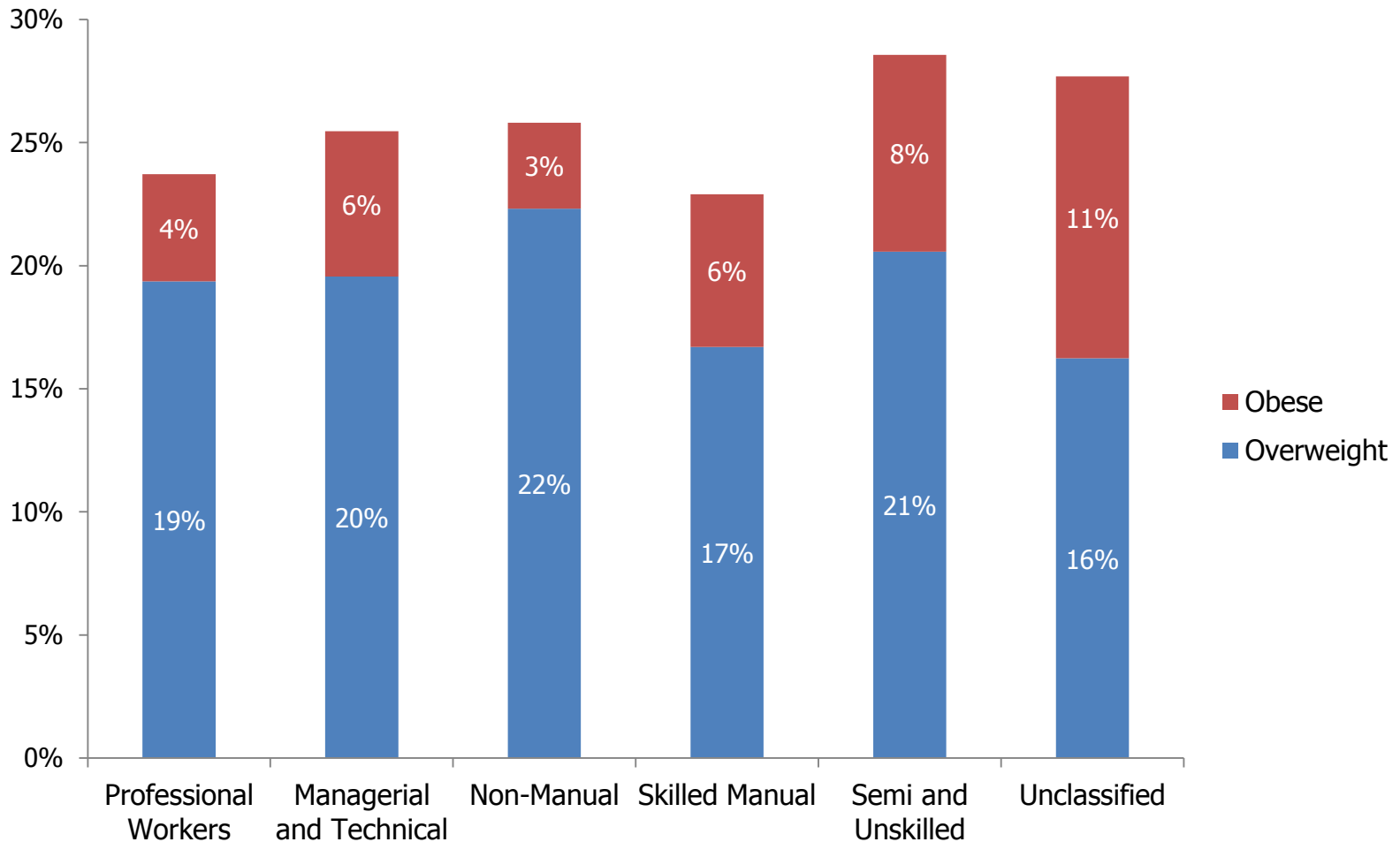
Prevalence by Social Class – Girls Age 9



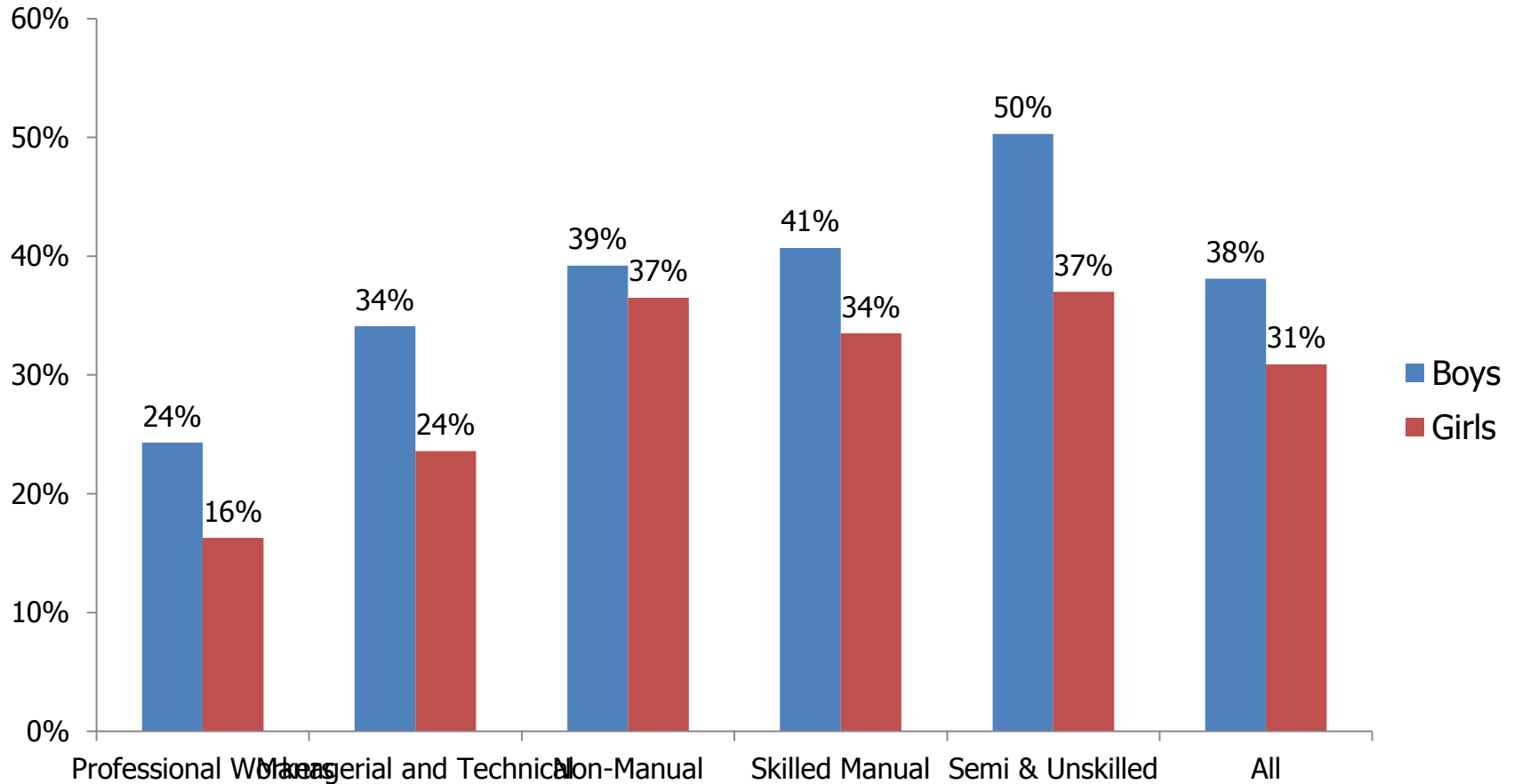
Prevalence by Social Class – Boys Age 3



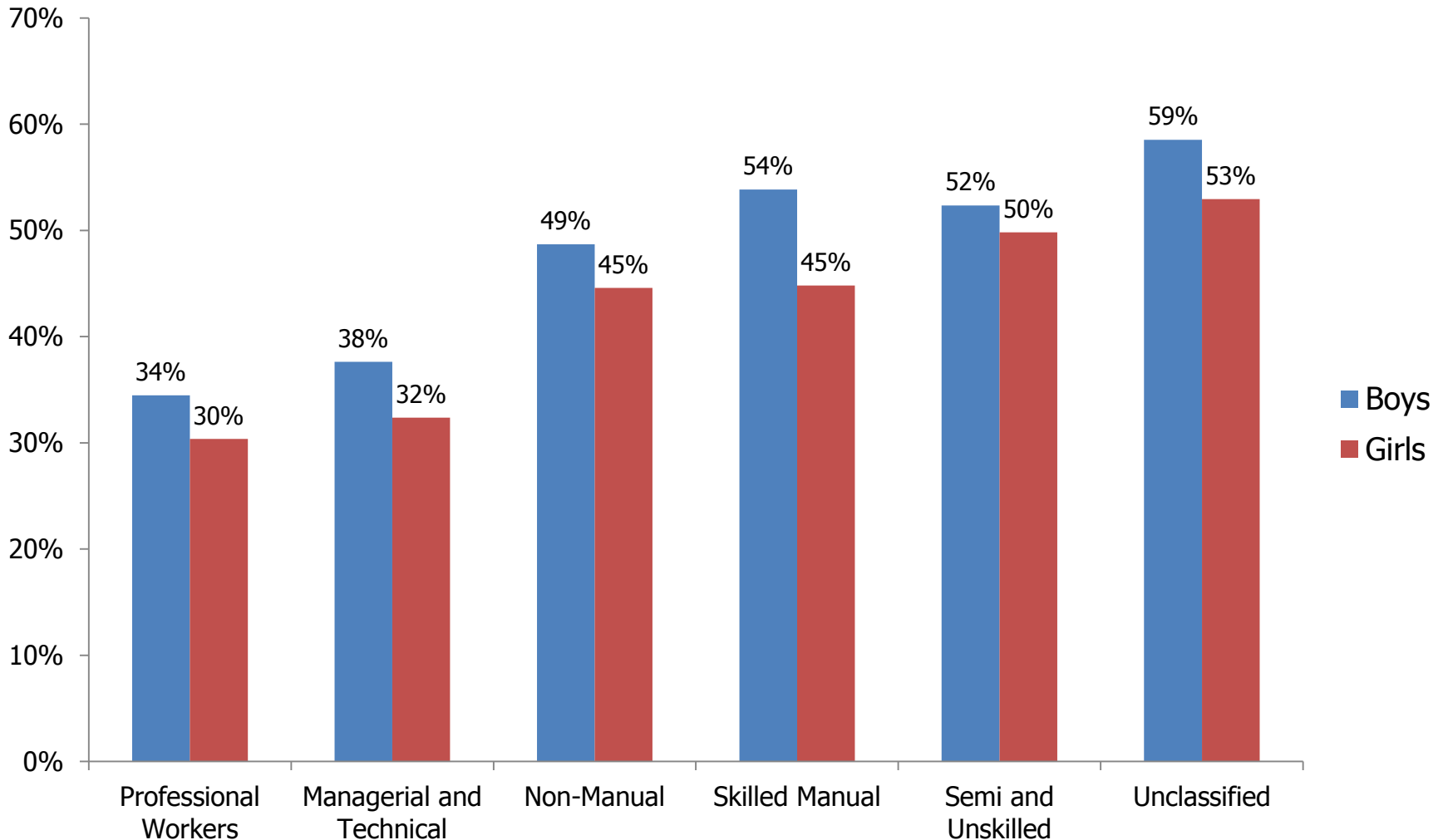
Prevalence by Social Class – Girls Age 3



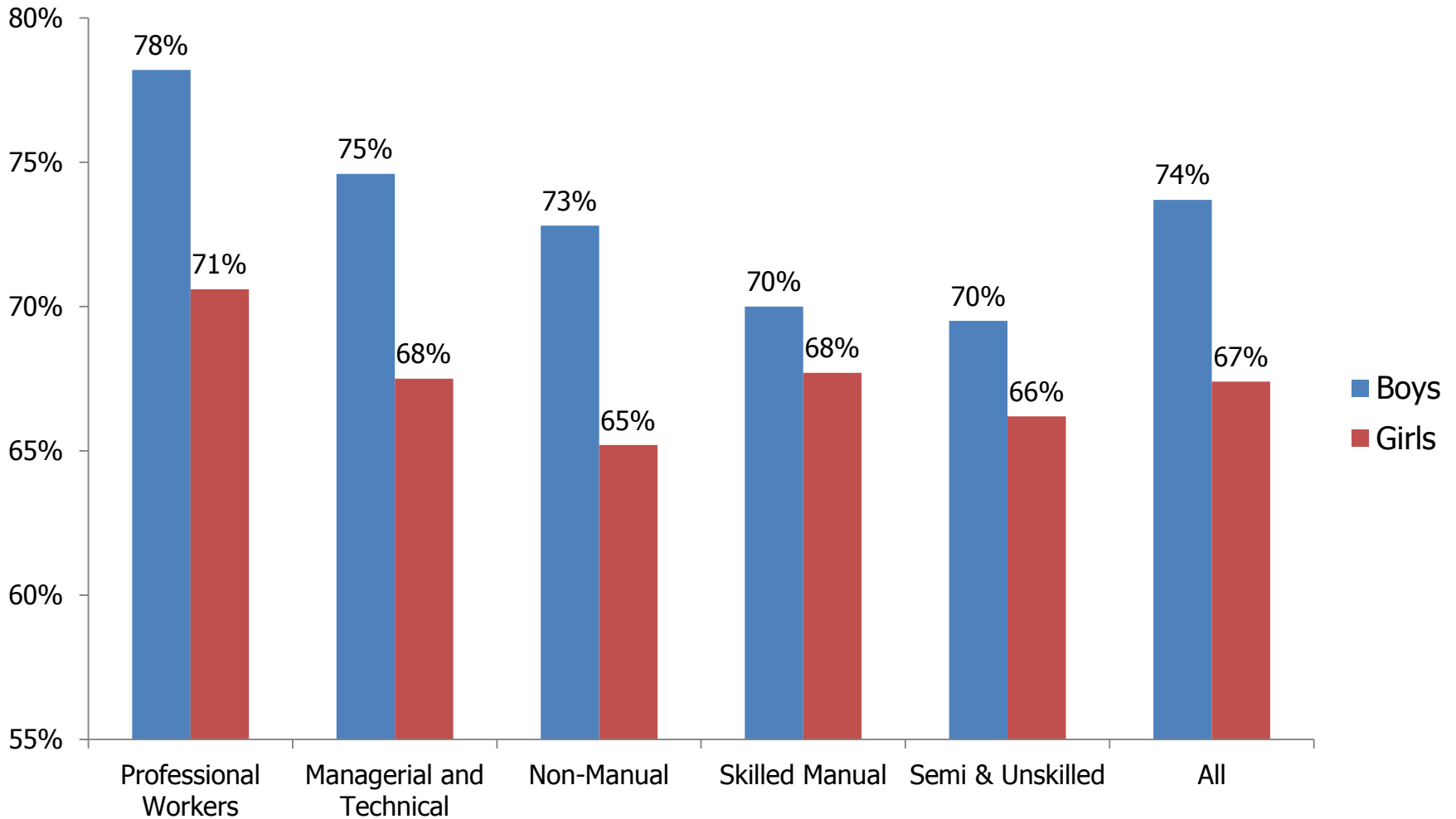
% Consuming Lowest Quality Diet by Sex (Child Cohort Wave 1 – 9 Years)



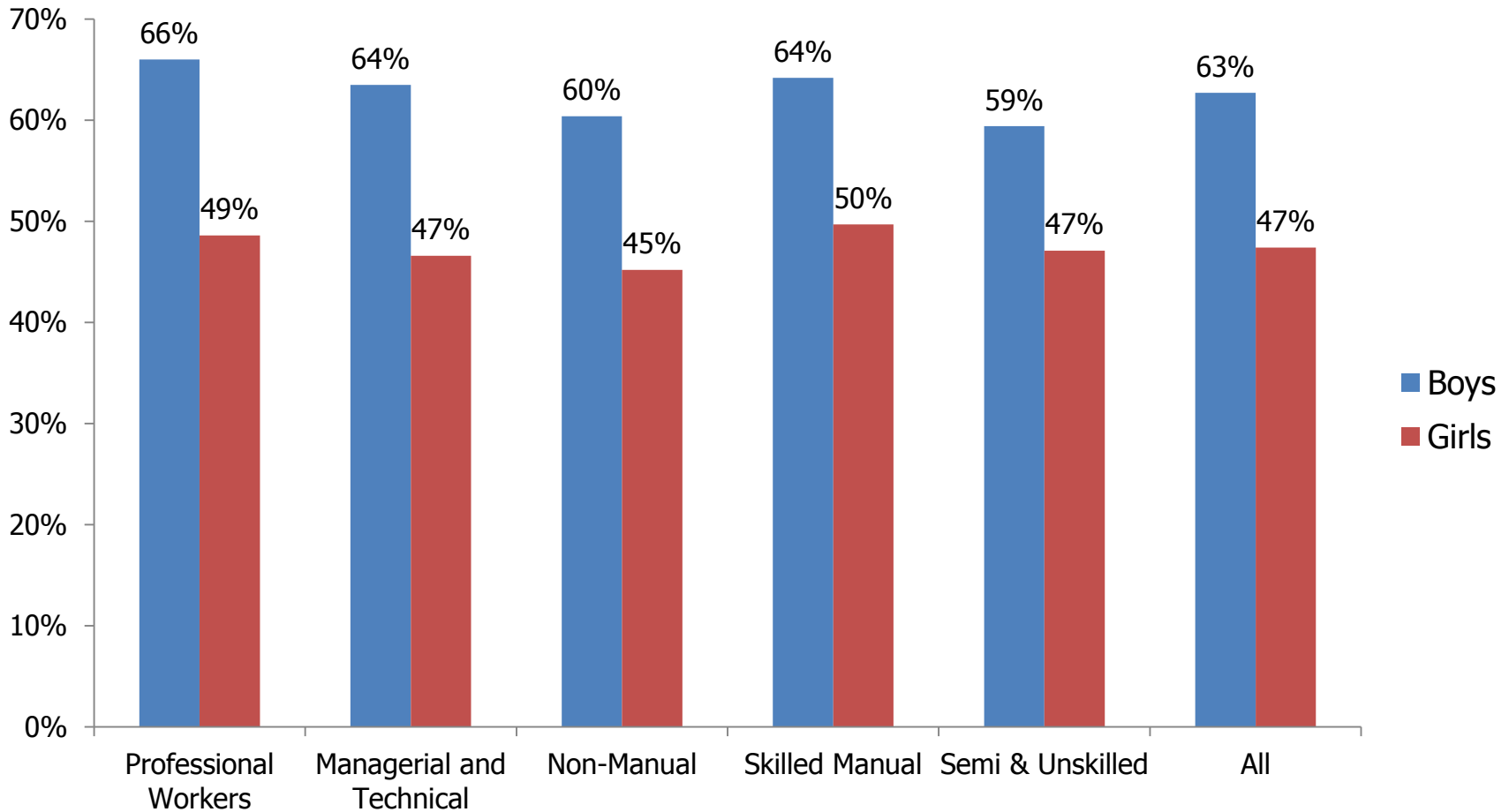
% Consuming Lowest Quality Diet by Sex (Infant Cohort Wave 2 – 3 Years)



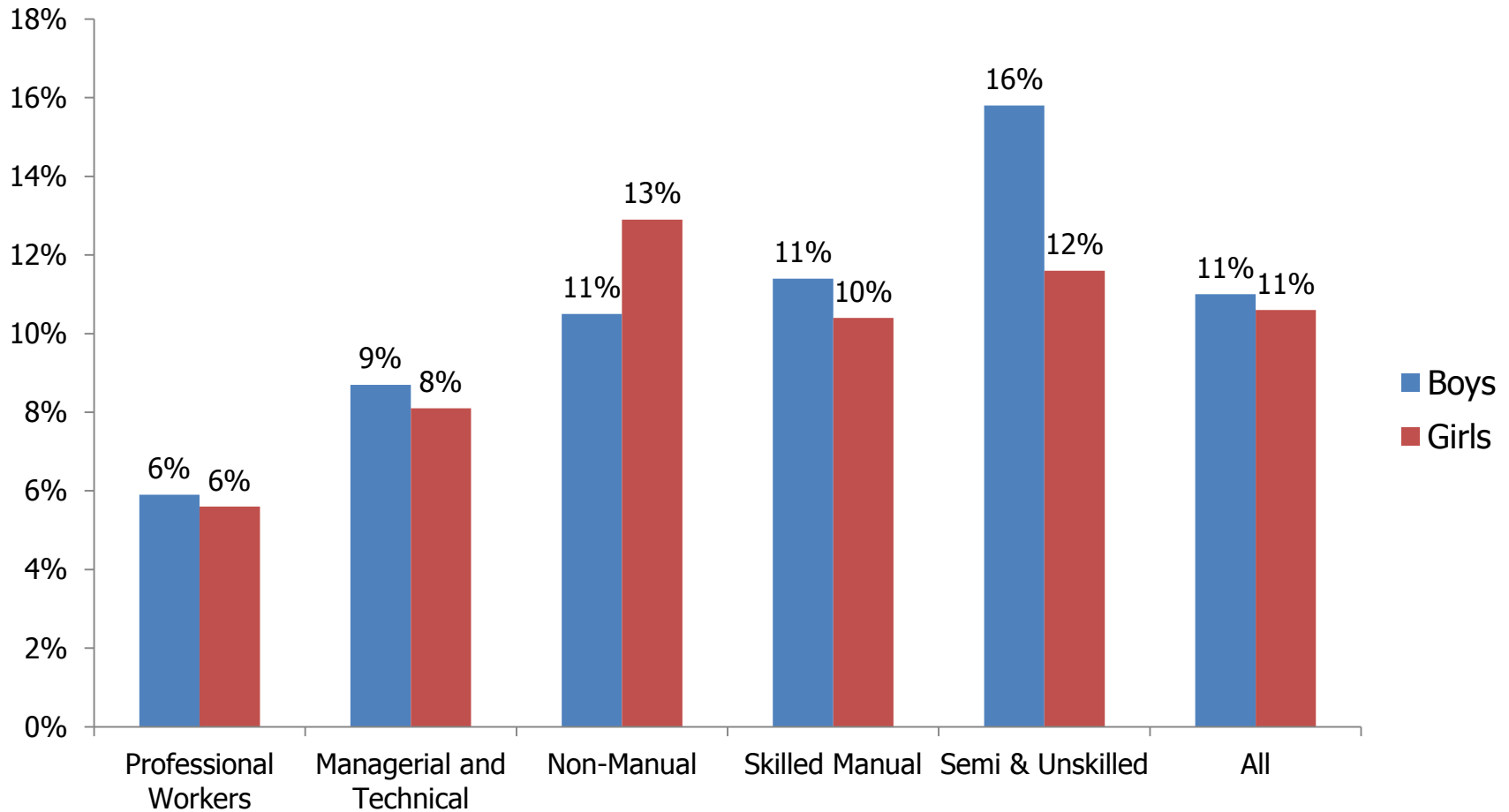
% Doing 20mins Light Exercise on 9+ Days in Last 2 Weeks by Sex and Class (Child Cohort 9 Years)



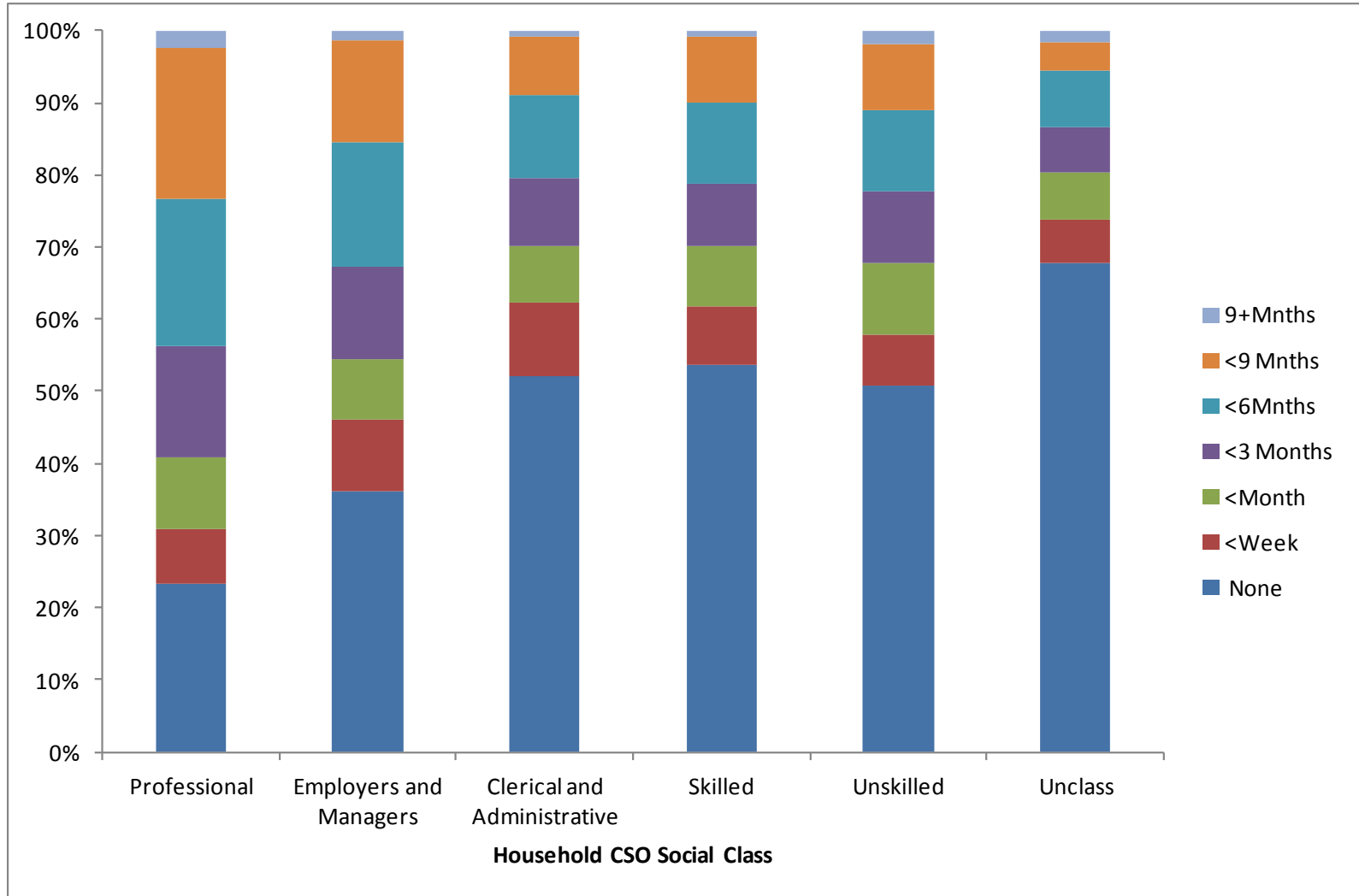
% Doing 20mins Hard Exercise on 9+ Days in Last 2 Weeks by Sex and Class (Child Cohort Wave 9 Years)



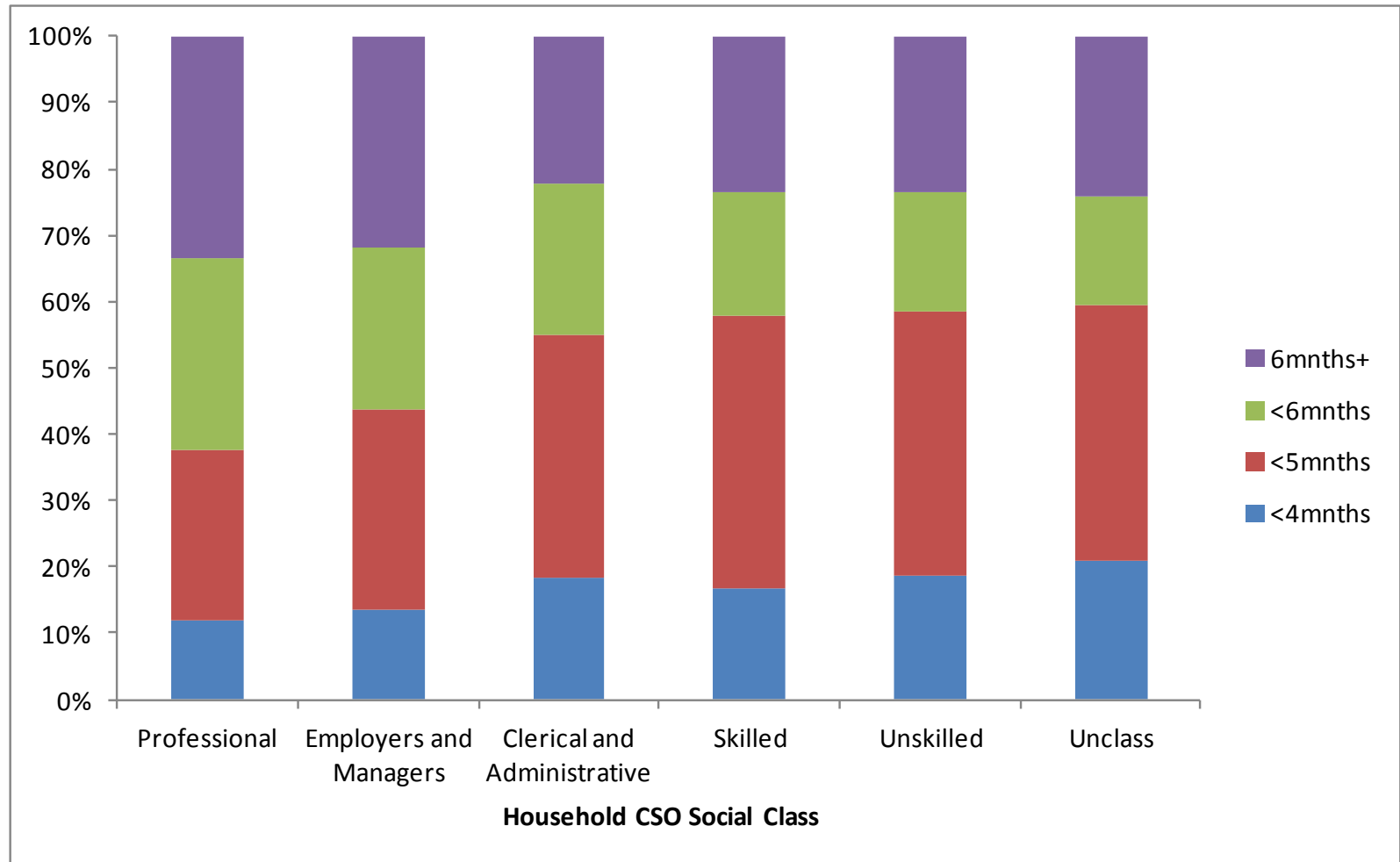
% Watching 3+ Hours TV on Average Per Weekday by Sex and Class (Child Cohort 9 Years)



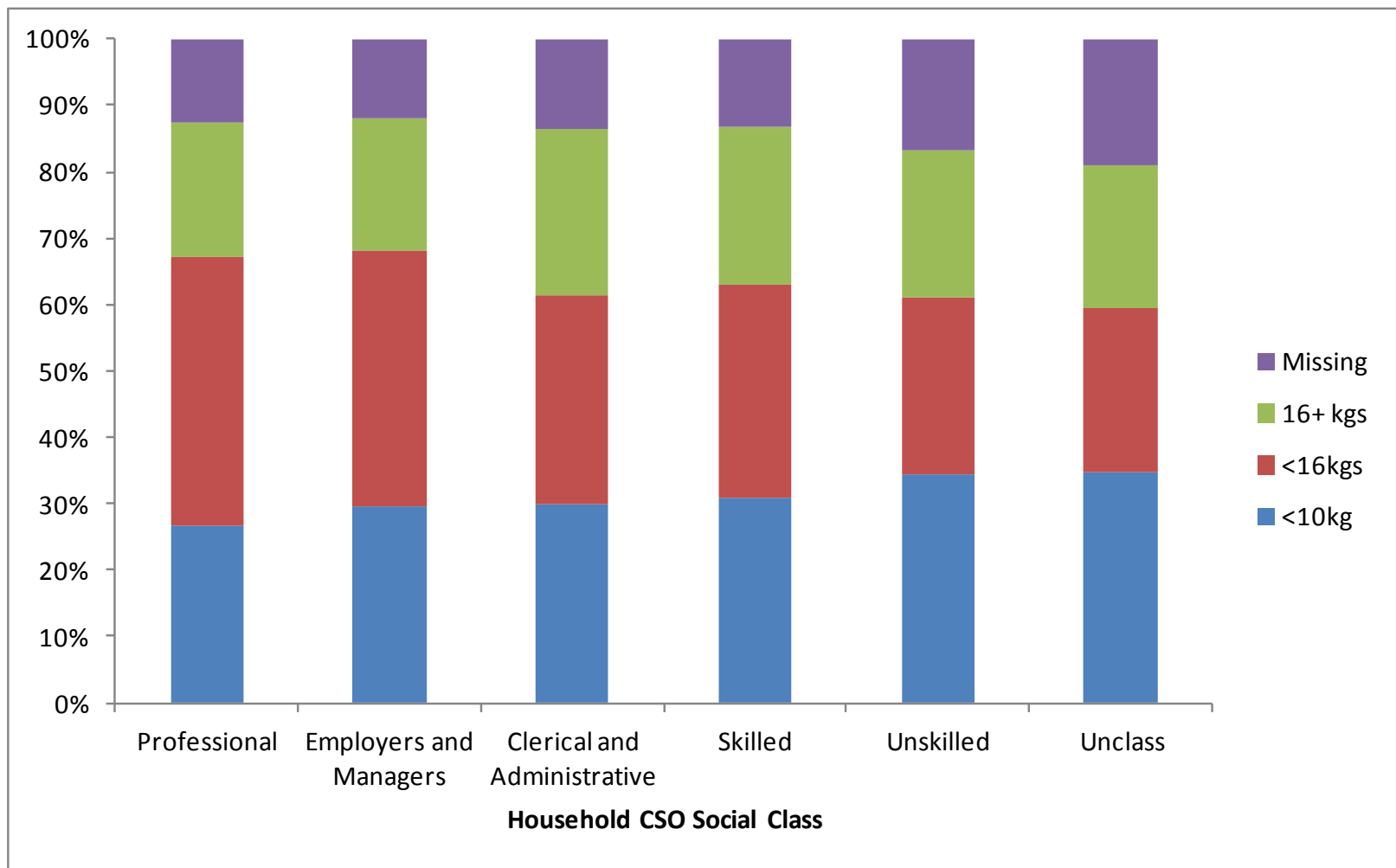
Breastfeeding by Social Class



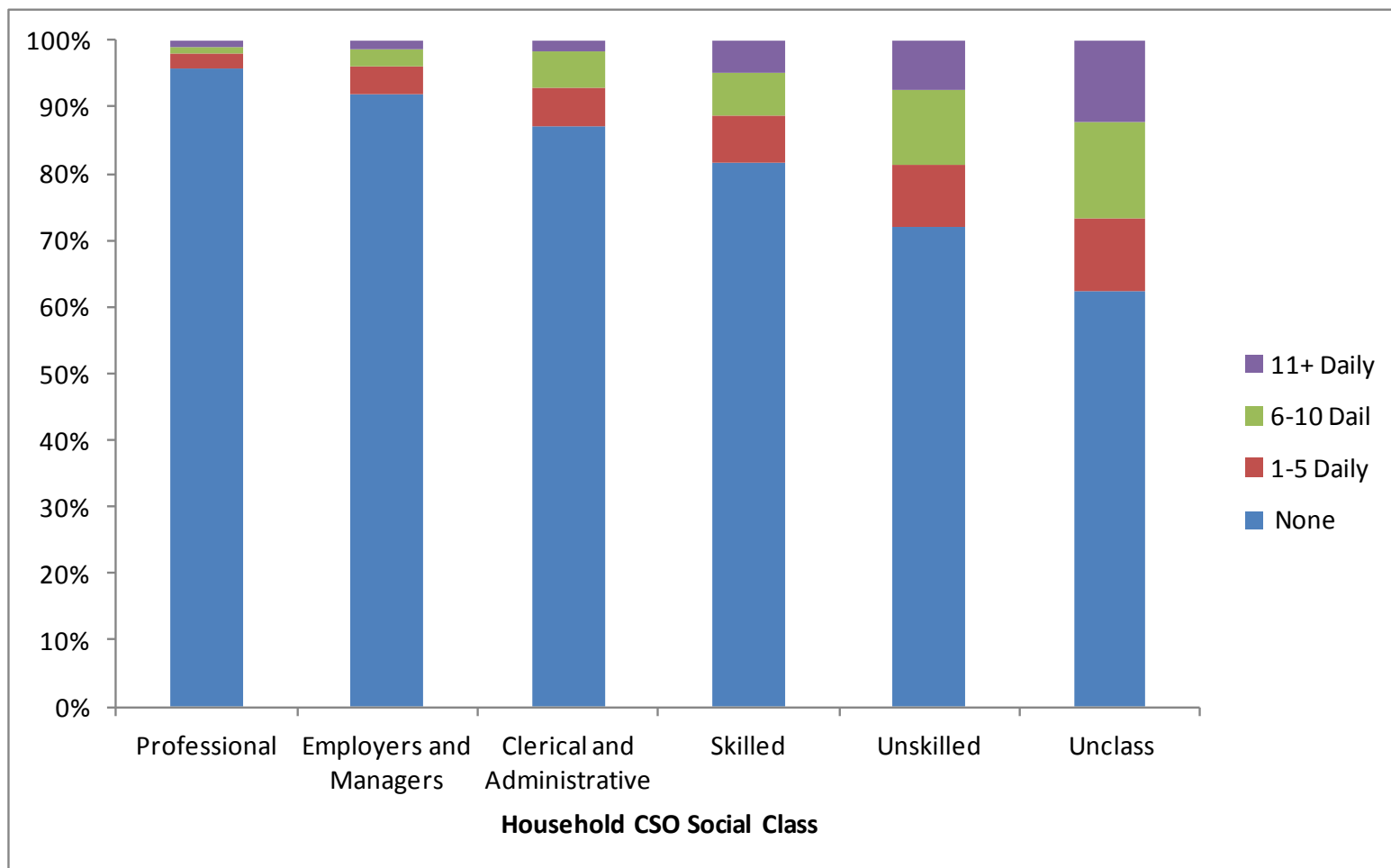
Age at Weaning by Social Class



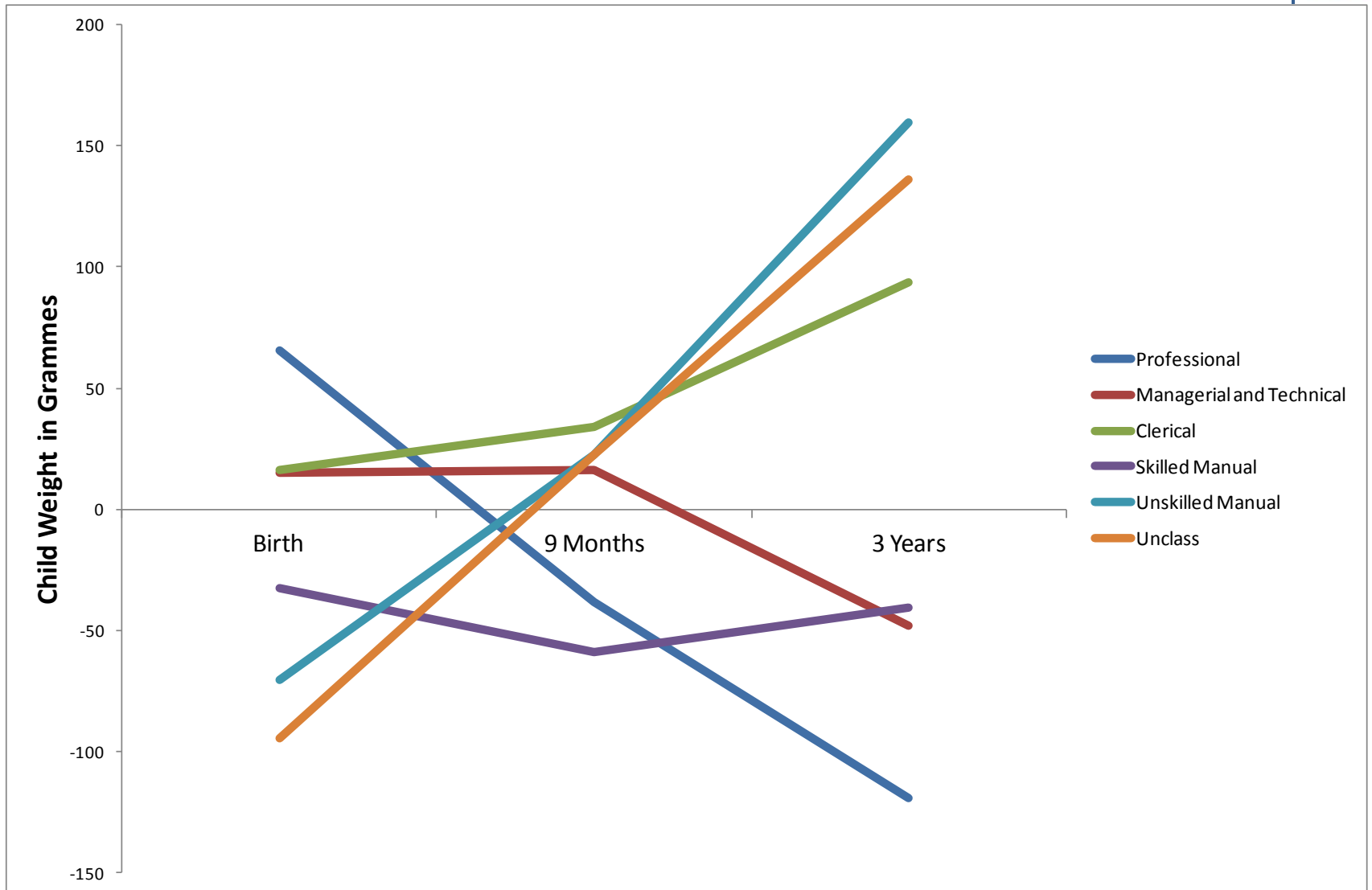
Maternal Weight Gain in Pregnancy



Prenatal Smoking by Social Class



Unadjusted Social Class Child Weights by Age

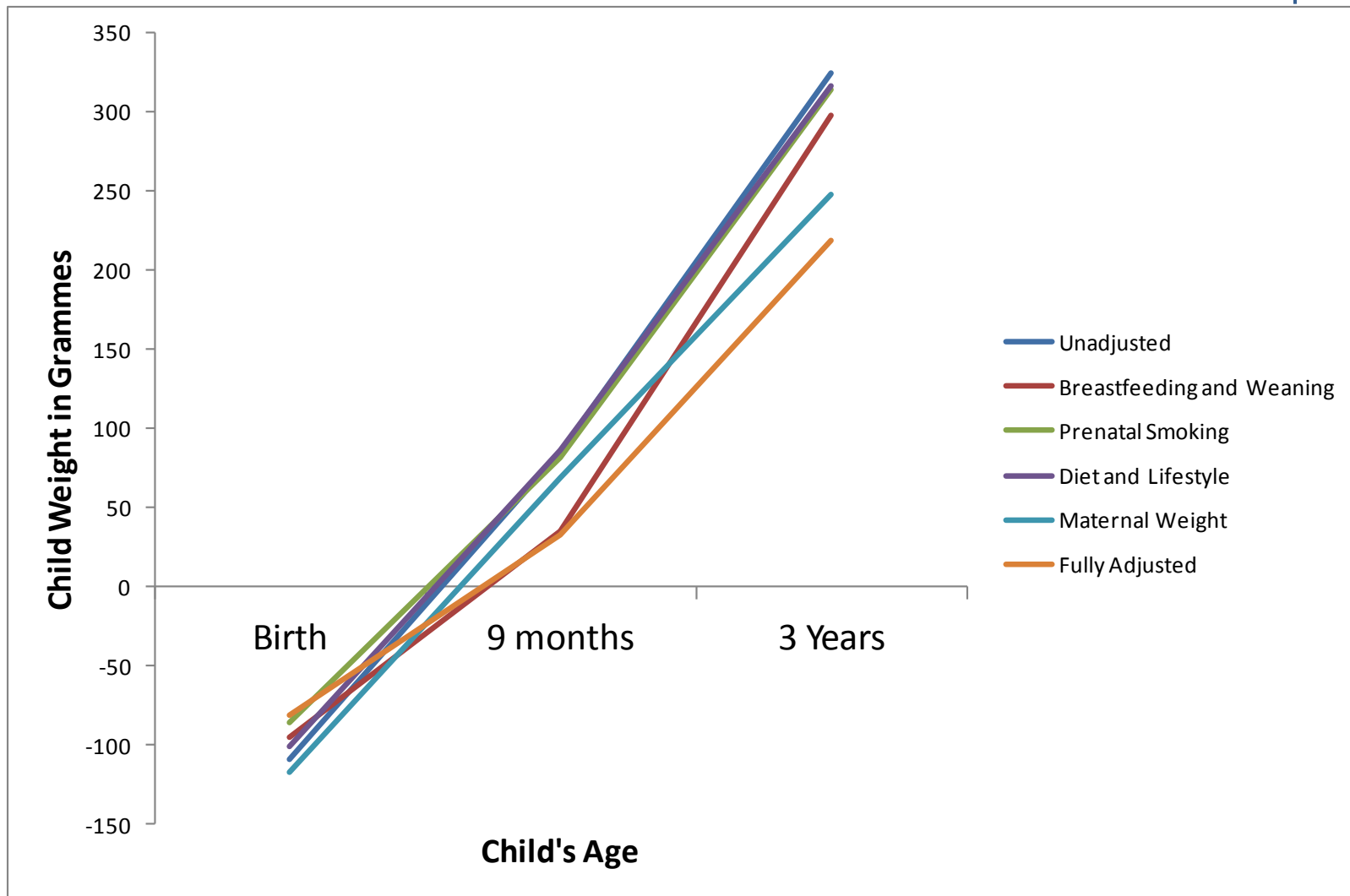


Direct Effects of SES on Mediators

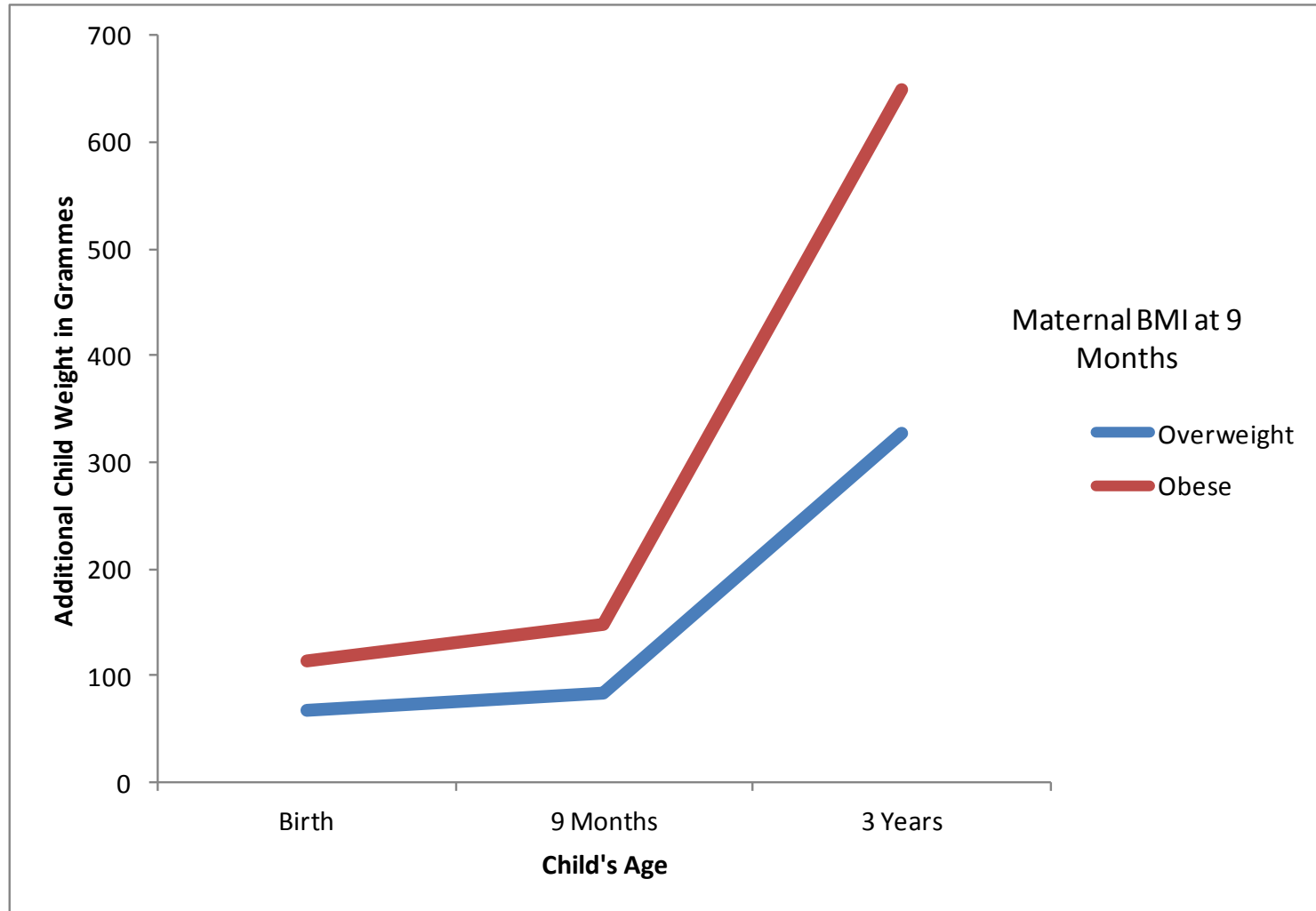


	Emps	Clerical	Skilled	unskilled	Unclass	Mean
Breastfeeding and Age at Weaning	9.00%	12.20%	16.60%	8.70%	8.60%	11.00%
Maternal Prenatal Smoking	3.10%	3.60%	10.70%	6.70%	11.70%	7.20%
Child Dietary Quality and TV Viewing	5.90%	2.80%	6.10%	1.60%	0.10%	4.10%
Maternal weight Gain and BMI	27.30%	27.60%	54.90%	24.30%	25.70%	33.50%
All	36.80%	38.10%	76.30%	35.50%	39.60%	46.70%

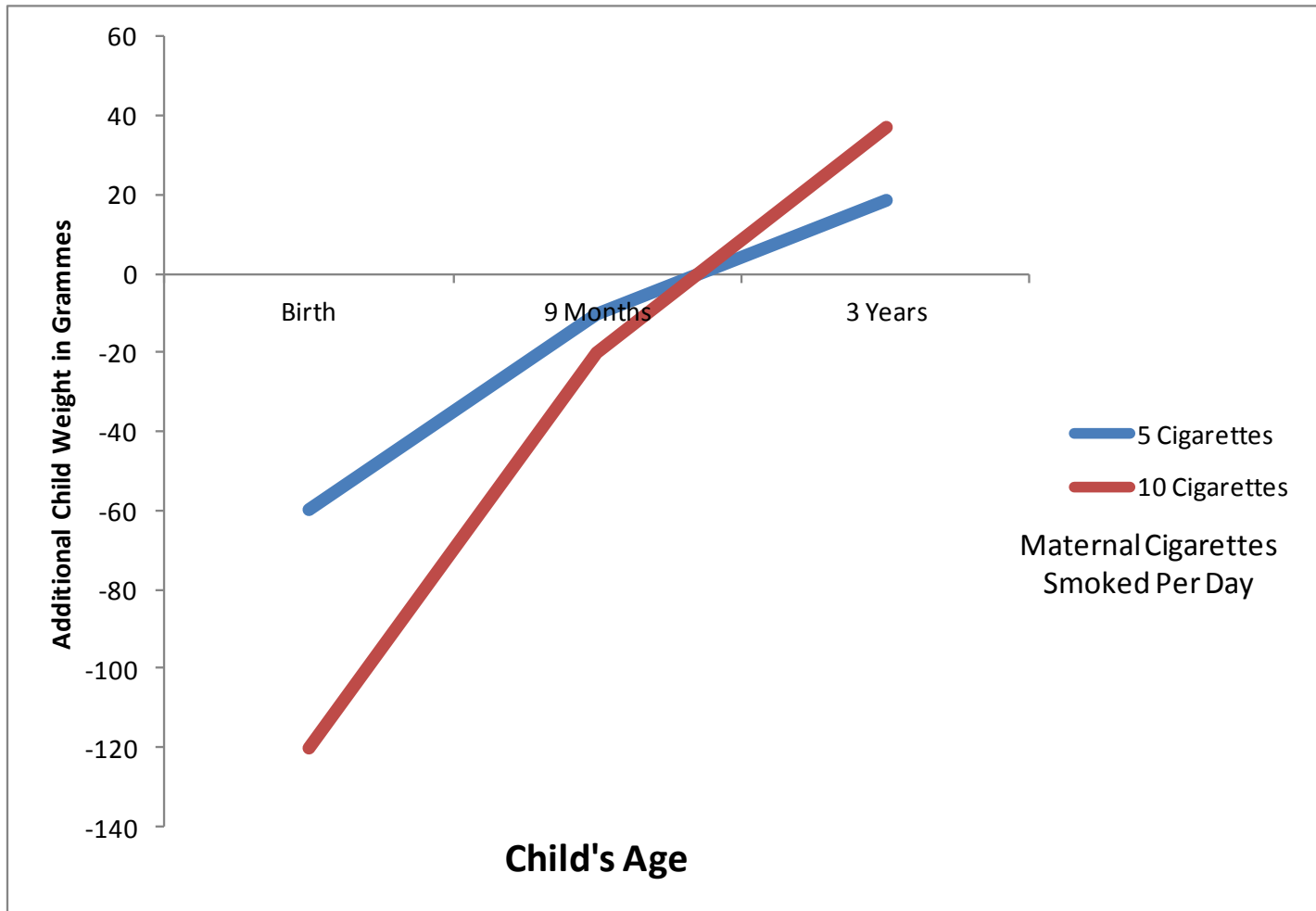
Reduction in Differential for Unskilled Manual to Professional Workers by Variable Groups



Direct and Indirect Effects of Maternal BMI?



Predicted Prenatal Smoking Effects



Summary

- The Growing Up in Ireland study provides researchers with high quality longitudinal data with which to investigate developmental processes
- Patterns of overweight and obesity are similar in child and infant cohorts
- Pronounced social class gradients and gender patterns
- Clear impact of diet and physical activity
- Developmental pathway to obesity begins early
- Four groups of risk factors explain half the class differential @ 3
- Maternal BMI and weight gain explains a third of the social class differentials