



# The effect of the Great Recession on socio-economic inequalities in childhood obesity: Findings from Growing Up in Ireland

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## Social gradient across many health outcomes

- Socio-economic position associated with health outcomes: worse socio-economic position means worse health
- Examples of inequality can be seen globally, nationally (WHO, 2008) and in Growing Up in Ireland (Nolan & Layte, 2014)

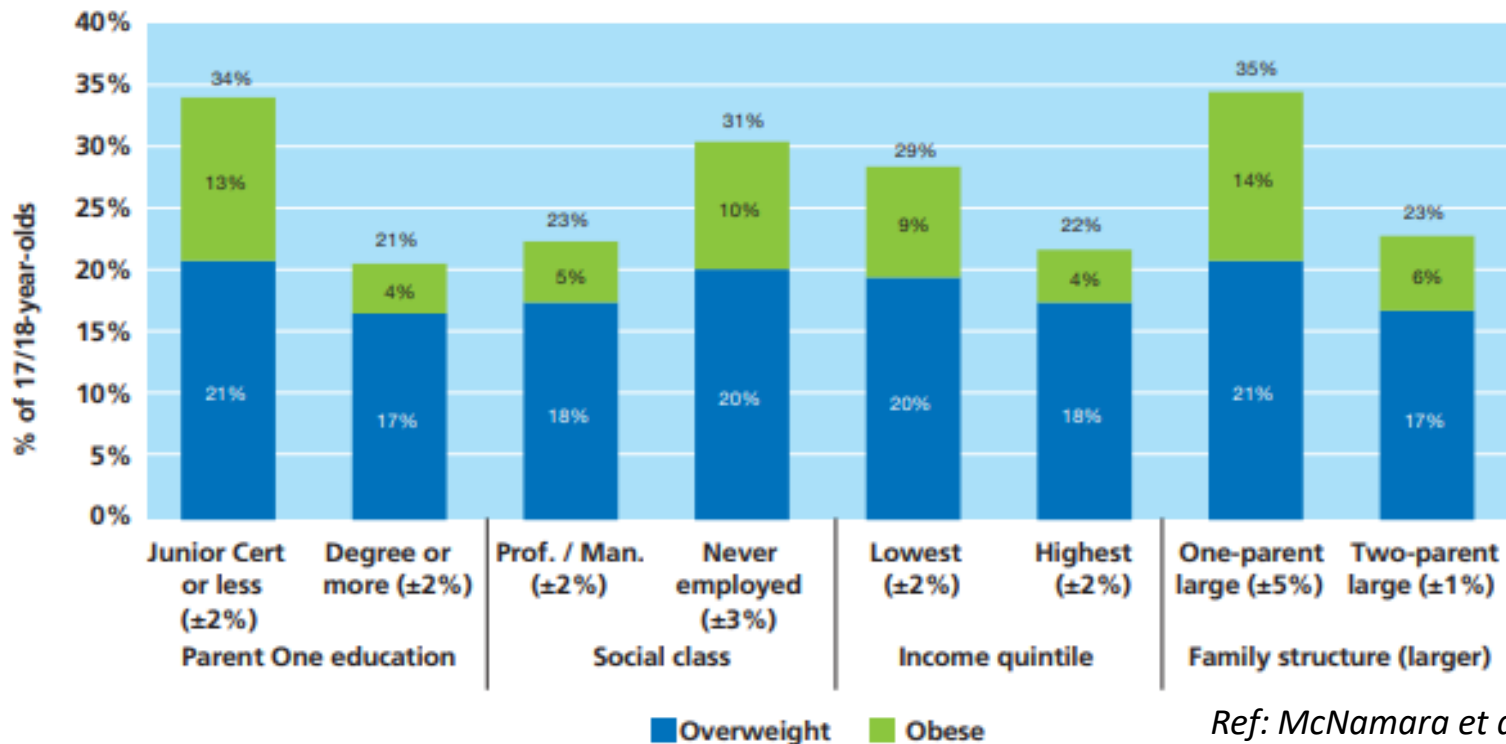
## Possible explanations for child healthy inequality?

- Direct effect
- Early childhood (in-utero) circumstances
- Parental health / behaviour
- Reverse causation

## Healthy weight important for physical & mental well-being

- Linked to many negative health outcomes (Lobstein and Jackson-Leach, 2011)
- Obesity can persist into adolescence/adulthood (Starc & Strell, 2010)

## Obesity risk greater amongst less socially advantaged

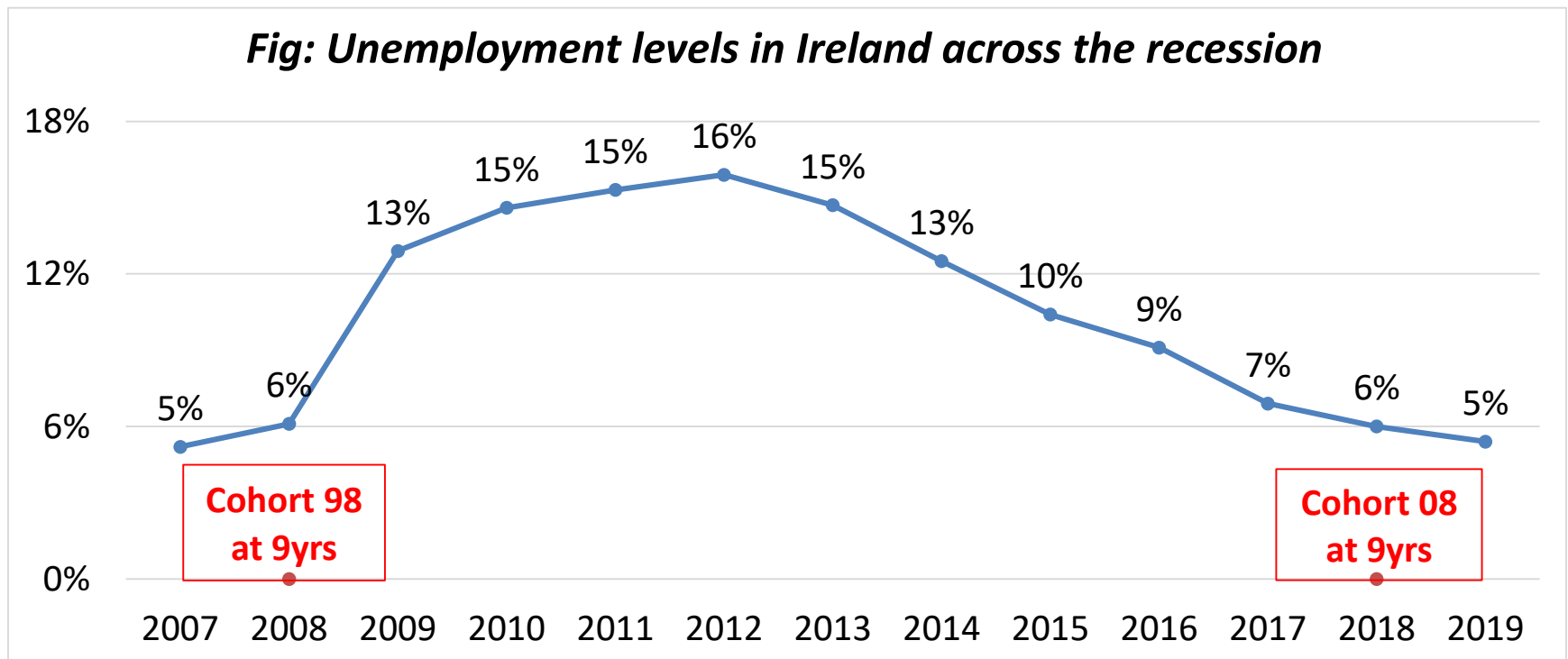


Ref: McNamara et al., 2020

Does a recession affect socio-economic inequality in obesity?

- Possibly magnify inequality – disadvantaged disproportionately affected
- Or act as a moderator and reduce inequality gap?

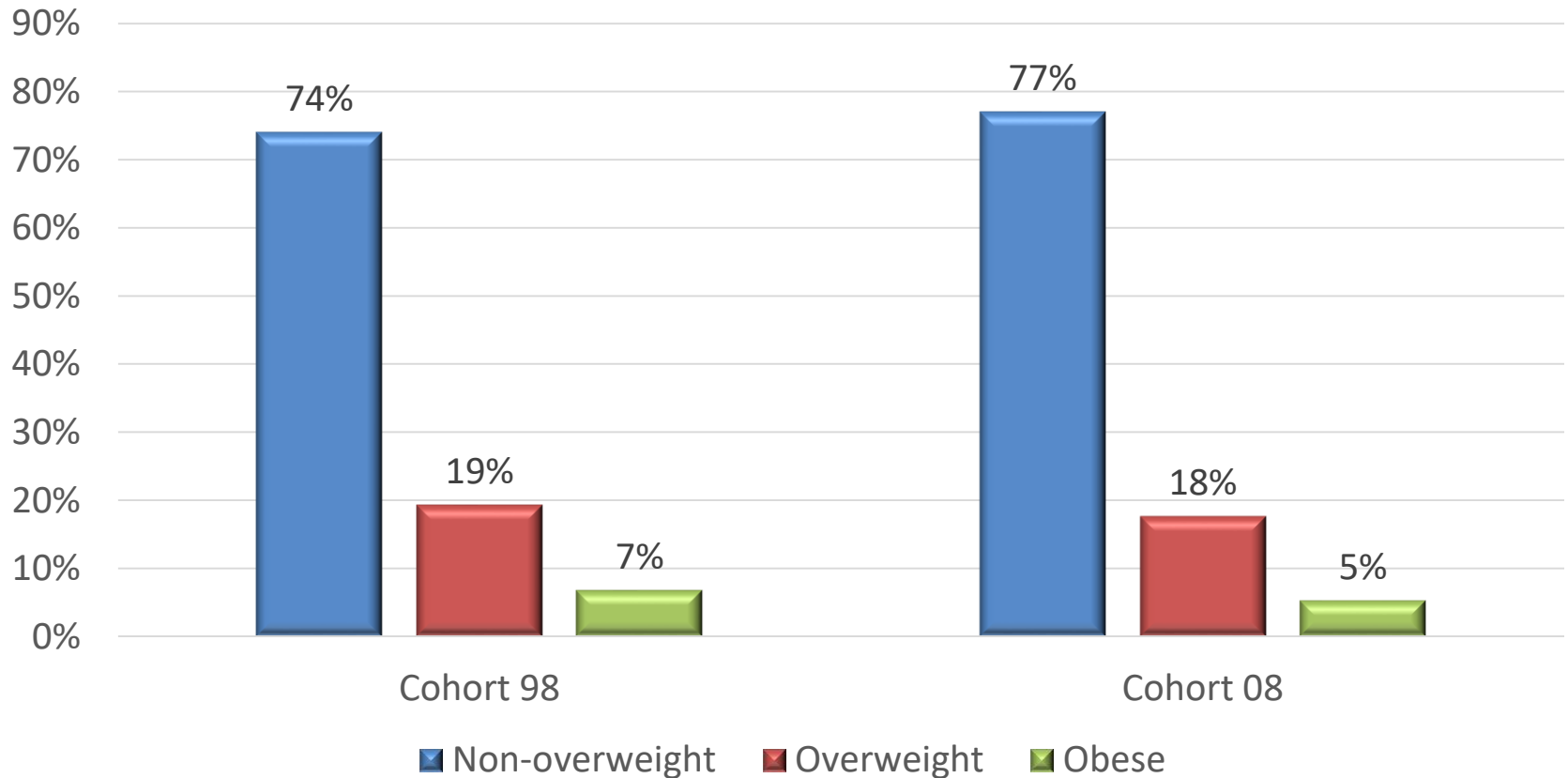
Natural experiment comparing GUI Cohort 98 and 08 at 9yrs....



- Two cohorts of GUI at 9 years
  - Cohort 98 in 2007-8                      n = 8,568 (1<sup>st</sup> wave)
  - Cohort 08 in 2017-18                      n = 8,032 (5<sup>th</sup> wave)
- Overweight/obesity calculated using BMI and IOTF gender- and age-specific cut-offs for children
- Socio-economic indicators (parent-reported)
  - Equivalised household income (income adjusted for family comp)
  - parental education, household type, family social class
- Other variables linked to obesity/health inequality:
  - Birth weight, breastfed, smoking/drinking during pregnancy
  - Child's gender, parent's BMI status, ethnicity

# RESULTS

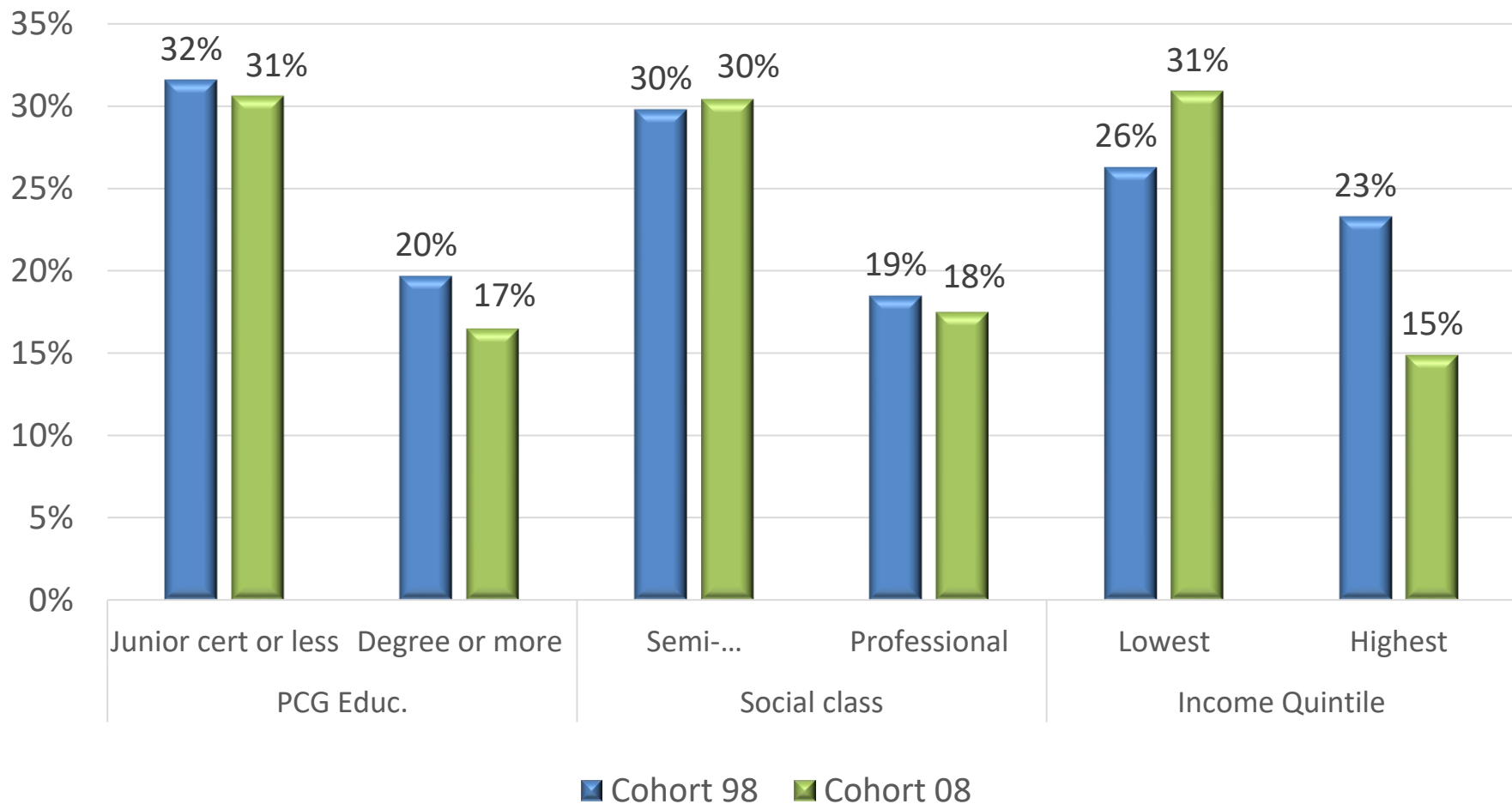
**Fig: BMI Status for all 9-year-olds in Cohort 98 and Cohort 08**



- Obesity levels significantly lower in Cohort 08
- Gender difference: girls more likely than boys to overweight/obese

# RESULTS

**Fig: Prevalence of overweight / obesity according to key socio-economic indicators**



# RESULTS

**Table: Comparison of socio-economic composition of lowest and highest income quintiles for both cohorts**

		Lowest Income		Highest Income	
		'98	'08	'98	'08
Household Type	Single parent	36%	35%	8%	6%
	Parent 1 Education				
Parent 1 Education	Leaving Cert or less	77%	52%	33%	9%
	Diploma or more	23%	48%	67%	91%
Family Social Class	Non-manual or less	86%	85%	25%	16%
	Managerial / technical / professional	14%	15%	75%	86%



# RESULTS

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# REGRESSION ANALYSIS

DEPENDENT VARIABLE: OVERWEIGHT OR OBESE BMI STATUS		ODDS RATIOS	
		Cohort 98	Cohort 08
<b>Gender</b> (ref: male)	Female	1.4***	1.3**
<b>Income</b> (ref: quintile 5)	Quintile 1	0.8*	1.4*
	Quintile 2	0.8*	1.3*
<b>Parent 1 Education</b> (ref: degree or more)	Junior Cert or less	1.4**	1.2
	Diploma	1.2	1.3*
<b>Hsd. Social Class</b> (ref: professional)	Semi-/unskilled/never worked	1.4*	1.0
	Skilled manual	1.5**	1.1
	Non-manual	1.3*	1.1
	Managerial	1.3*	1.0
<b>Hsd. Type</b> (ref: 2 parent, large)	1 parent, small	1.5***	1.5**
	1 parent, large	1.4*	1.5*
	2 parent, small	1.3***	1.3**
<b>Birth weight</b> (ref: low, <2.5kg)	Non-low birth weight	1.4	2.0**
<b>Breastfed</b> (ref: breastfed)	Not breastfed	1.2*	1.2
<b>Smoked during pregnancy?</b>	Smoked	1.4***	1.7***
<b>Parent 1 BMI Status</b> (ref: healthy weight)	Overweight or obese	2.0***	2.0***
	Obese	1.7***	1.7***
<b>PCG Ethnicity</b> (ref: Irish)	Non-Irish ethnicity	1.1	1.4**

## Summary:

- Increased inequality in overweight/obesity (post-recession) according to household income, but less inequality according to social class
- Parental education substantially higher in the post-recession cohort
- Confirms complexity of obesity risk/inequality – requires combination of policies addressing social factors

## Limitations / Future Research:

- Include data from other waves of GUI
  - Explore the effects of the recession on individual families
  - Measure changes to socio-economic position from birth to adolescence
- Employ econometric analysis techniques e.g. concentration indices, decomposition analysis

# Thank you

Many thanks to....

- My GUI colleagues and those at the DCYA, TCD and CSO
- Huge thanks to all the GUI study children and families

Questions, comments or feedback welcome.

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