



# Weight, body image and bullying in nine-year-olds

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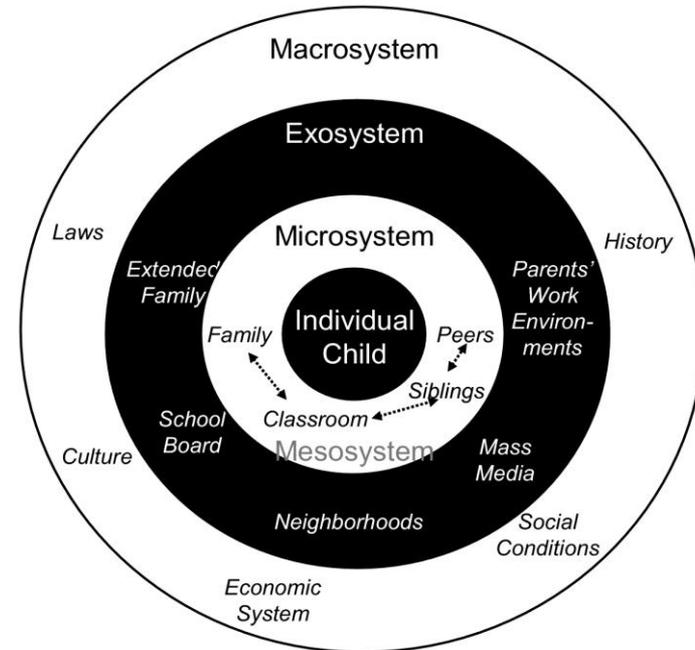
# Overview of presentation

- Foundations of health
- Definition of bullying
- Abnormal body weight
- Growing Up in Ireland cohort
- Methodology
- What is already known?
- Prevalence of bullying
- Weight-related factors associated with bullying
- Conclusions
- Implications

# Foundations of health

- **Shaped by**

- Biological
- Psychological
- Environmental
- Social
- Spiritual



- **Health outcomes**

- Interaction of genetic & environmental influences
- Begin in womb - perhaps earlier

Eisenberg et al. (2003). "Associations of Weight-Based Teasing and Emotional Well-being Among Adolescents." *Arch Pediatr Adolesc Med* **157**(8): 733-738.



# Definition of Bullying

- Bullying is a form of aggressive behaviour which is
  - intentional
  - recurrent
  - designed to inflict pain on or cause distress to another individual
- These actions may take a variety of forms; for example by physical contact, verbal abuse, exclusion or (electronically) via notes



# Abnormal body weight in children

- Overweight and obesity among children and adolescents are of ongoing concern worldwide.
- The past two decades have seen a dramatic increase in childhood obesity with 10% of children worldwide classified as overweight or obese.
- Research has found that overweight and obese children will generally become overweight and obese adults.



# Adverse effects of abnormal body weight

Obesity has been well established as a leading risk factor for

- cardiovascular disease
- metabolic disease
- musculoskeletal disorders
- other chronic diseases
- some cancers
- and an overall higher chance of premature death and disability.

In addition to the physical consequences, childhood overweight and obesity is associated with a range of other negative outcomes including poor psychological and educational outcomes and social inequalities.



# Study and sample design

- This study presents findings from the first wave of data collection from *Growing Up in Ireland – the National Longitudinal Study of Children*.
- The sample of 8,568 nine-year-old children and their families was generated through the primary school system using a two-stage sample design.
- All figures presented are based on statistically reweighted data to ensure that it is representative of all nine-year-olds in Ireland.



# Weight related questions

- The interviewer took the height and weight of the study child in order to derive a Body Mass Index score.
  - International cut off points for body mass index for thinness, overweight and obesity for nine years of age were used \*
  - The study child was asked: “How would you describe yourself?” The child then indicated very skinny, a bit skinny, just the right size, a bit overweight, or very overweight.
- \* Cole et al. Establishing a standard definition for child overweight and obesity worldwide: international survey. *BMJ*. 2000 6;320(7244):1240-3.  
Cole et al. Body mass index cut offs to define thinness in children and adolescents: international survey. *BMJ*. 2007 Jul 28;335(7612):194.



# Bullying-related questions

- Regarding bullying, the child was provided with a questionnaire about sensitive issues which he/she completed alone at home:  
*“Thinking back over the last year would you say that anyone (either a child or an adult) picked on you?”*
- The primary caregiver was asked:  
*“Does the Study Child have any on-going chronic physical or mental health problem, illness or disability?”*



# What is already known?

- Childhood bullying is associated
  - with later adult anti-social behaviour
  - with limited opportunities to attain socially desired objectives
  - adverse effect on physical and emotional wellbeing
- Indicator of future sexual harassment, marital aggression, child abuse, and elder abuse
- May lead to a higher risk for self-aggressive behaviour
- It is well known that children and adolescents are bullied because of their race, ethnicity, religion or appearance



# Victimisation in the past year

- For **boys**:

By primary caregiver: 23.1% (95% CI: 21.9%-24.4%)

By study child: 40.1% (95% CI: 38.7%-41.6%)

- For **girls**:

By primary caregiver: 24.0% (95% CI: 22.7%-25.3%)

By study child: 39.7% (95% CI: 38.2%-41.2%)

# Impact of victimisation

Child was upset by bullying:

- A lot: boys: 35.6%; girls: 46.9%
- A little: boys: 50.2%; girls: 46.4%
- Not at all: boys: 14.2%; girls: 6.7%

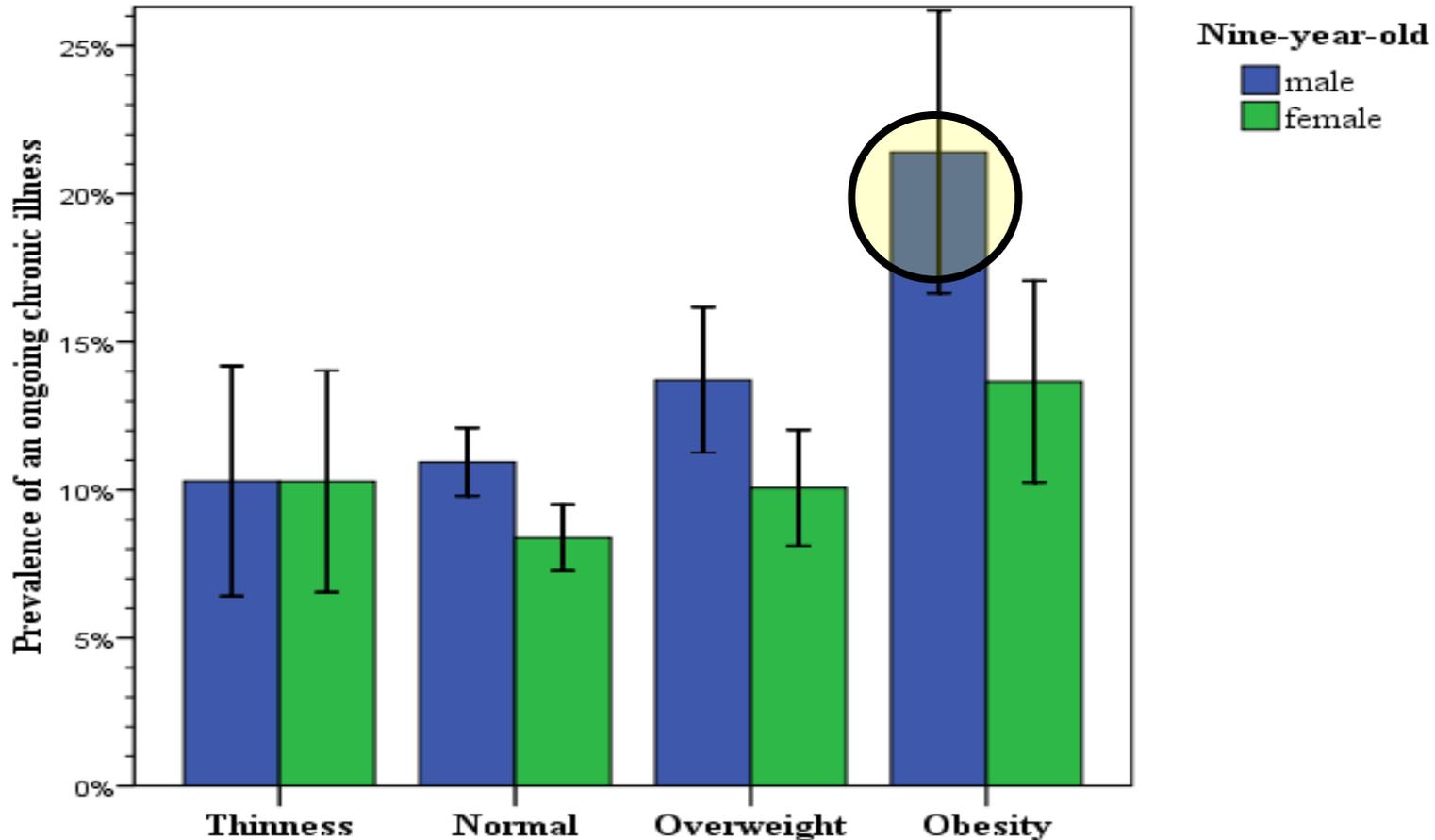


# Prevalence of abnormal body weight

	Prevalence (95% CI)	% chronic illness
Thinness grade 3		
<b>Girls</b>	<b>5.1%</b> (4.5 – 5.9%)	<b>10.4%</b>
<b>Boys</b>	<b>4.4%</b> (3.8 – 5.1%)	<b>13.0%</b>
Normal weight		
<b>Girls</b>	<b>60.4%</b> (58.8 – 61.9%)	<b>8.4%</b>
<b>Boys</b>	<b>69.1%</b> (67.6 – 70.4%)	<b>10.9%</b>
Overweight		
<b>Girls</b>	<b>23.1%</b> (21.8 – 24.4%)	<b>10.1%</b>
<b>Boys</b>	<b>18.3%</b> (17.1 – 19.5%)	<b>13.7%</b>
Obesity		
<b>Girls</b>	<b>10.0%</b> (9.1 – 11.0%)	<b>13.7%</b>
<b>Boys</b>	<b>6.9%</b> (6.2 – 7.7%)	<b>21.4%</b>



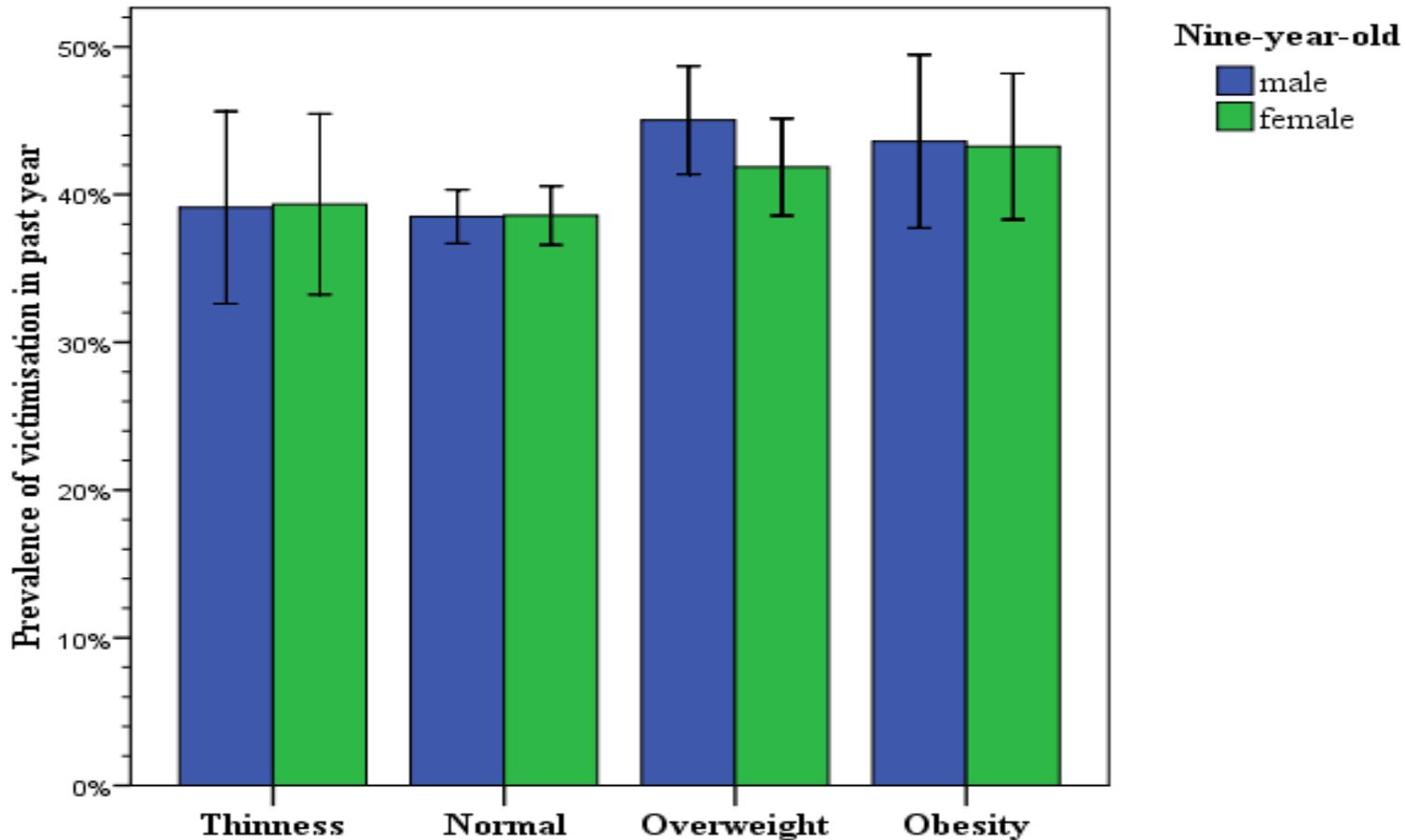
# Association between chronic illness and abnormal body weight



Error bars: 95% CI



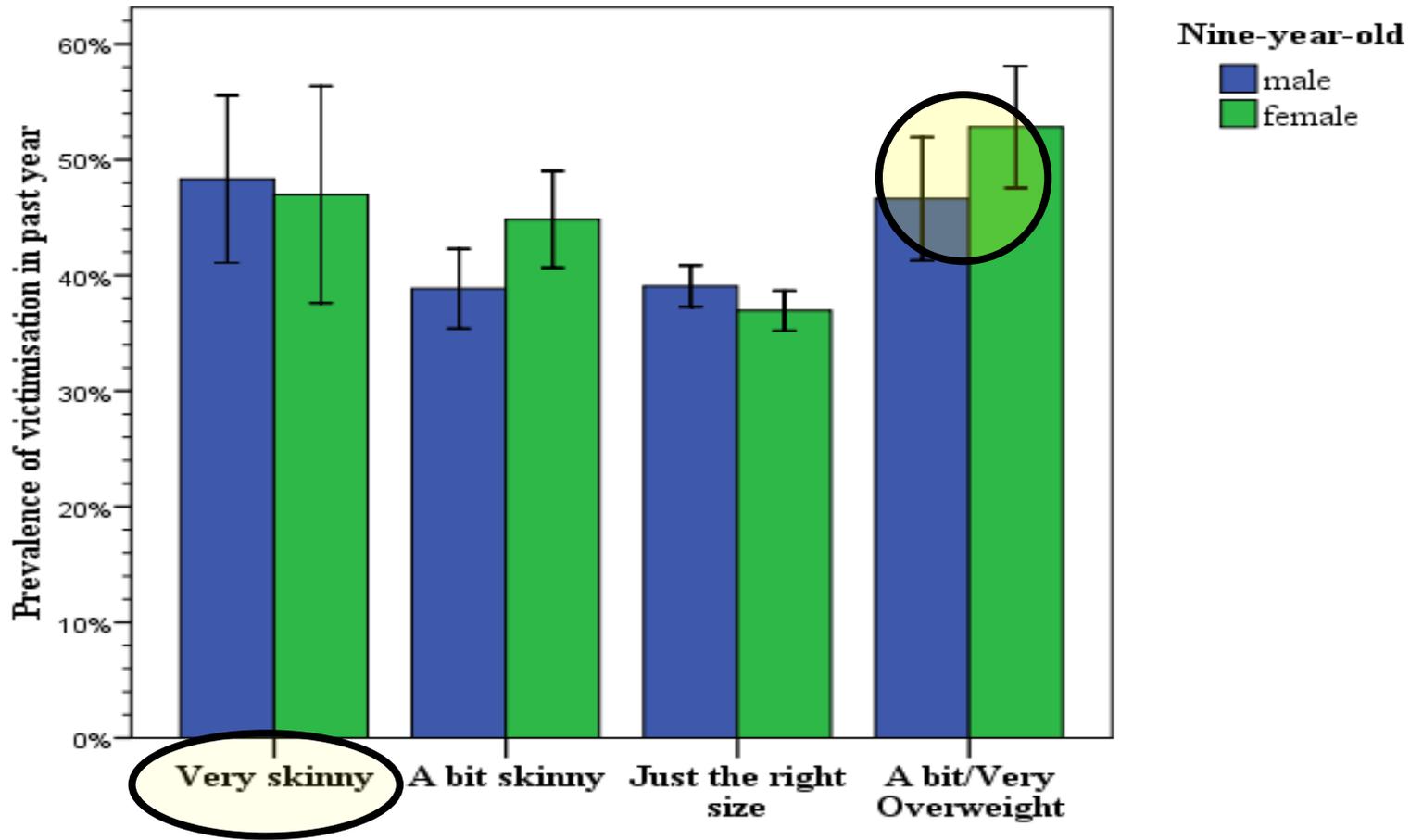
# Association between victimisation and abnormal body weight



Error bars: 95% CI



# Association between victimisation and child's description of self



Error bars: 95% CI



# Conclusions

- Previous research has indicated that girls may be more susceptible to overweight and obesity than boys.
- However, while obesity was found to be more prevalent in girls in general, in an overweight or obese subpopulation, boys were found to be more likely to suffer from an ongoing chronic illness than girls.



# Conclusions

- The increased likelihood of victimisation by bullying in overweight and obese children is an expected finding and is supported by previous research .
- Self esteem and self image may play a more significant role in the relationship between weight status and victimisation / bullying than the actual objective weight of the child.



# General implications

- For teachers:
  - Child with chronic illness / different bodyweight may be a victim or a bully-victim
- For clinicians:
  - Become part of the clinical history of children with chronic illnesses
- For Health Policy:
  - NGOs, education & health need to incorporate it into training days & advice
- For parents
  - Its common, teachers & doctors may ask about it



# Implications for General Practice

- Clinicians may need to build a series of questions relating to experiences of victimisation into the clinical history of children with chronic illness
- It is also necessary to explore the effect of negative weight stereotyping on bullying in children
- The higher rates of overweight and obesity in Irish girls require further investigation



# Acknowledgment

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- The Office of the Minister for Children is overseeing and managing the study, which is being carried out by a consortium of researchers led by the Economic & Social Research Institute (ESRI) and Trinity College Dublin. For more information: [www.growingup.ie](http://www.growingup.ie)
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# Acknowledgment



**Growing Up  
in Ireland**  
National Longitudinal  
Study of Children



HRB CENTRE FOR  
PRIMARY CARE RESEARCH



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# Thank You

# Questions?