

The persistent impact of being bullied during childhood and adolescence: Implications for policy and practice

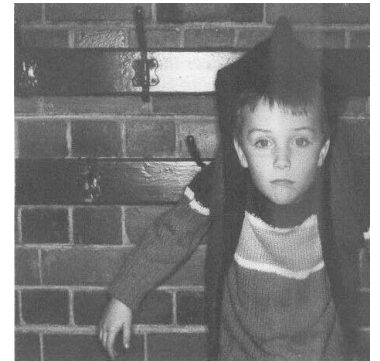
Louise Arseneault

Institute of Psychiatry, Psychology and Neuroscience
King's College London



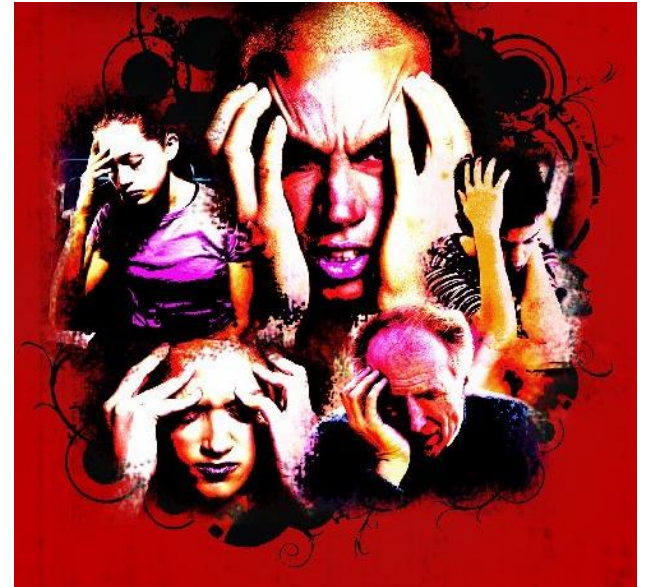
Longitudinal developmental science
University of Liverpool
Liverpool, October 12th 2017



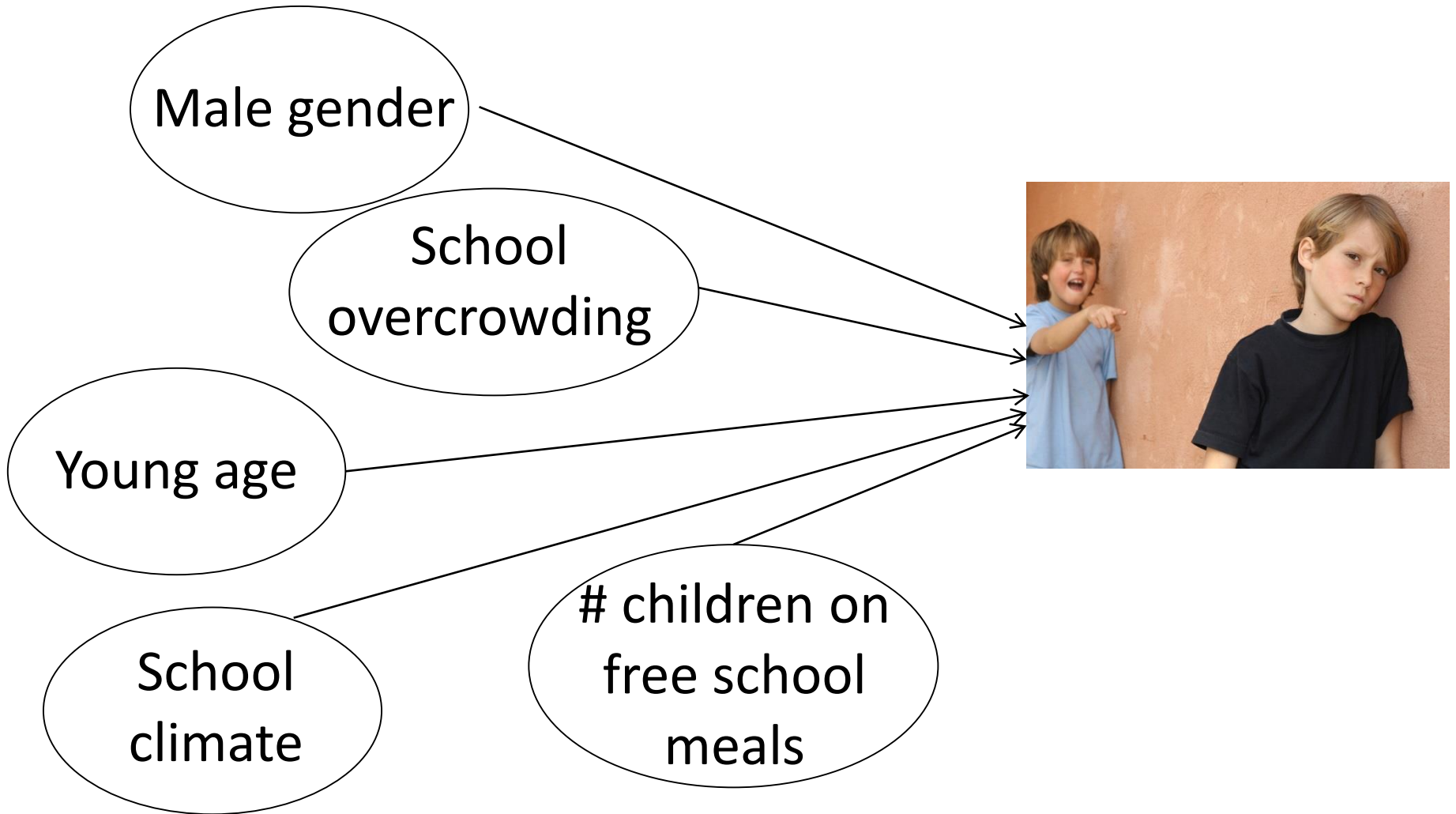


We should bother about bullying

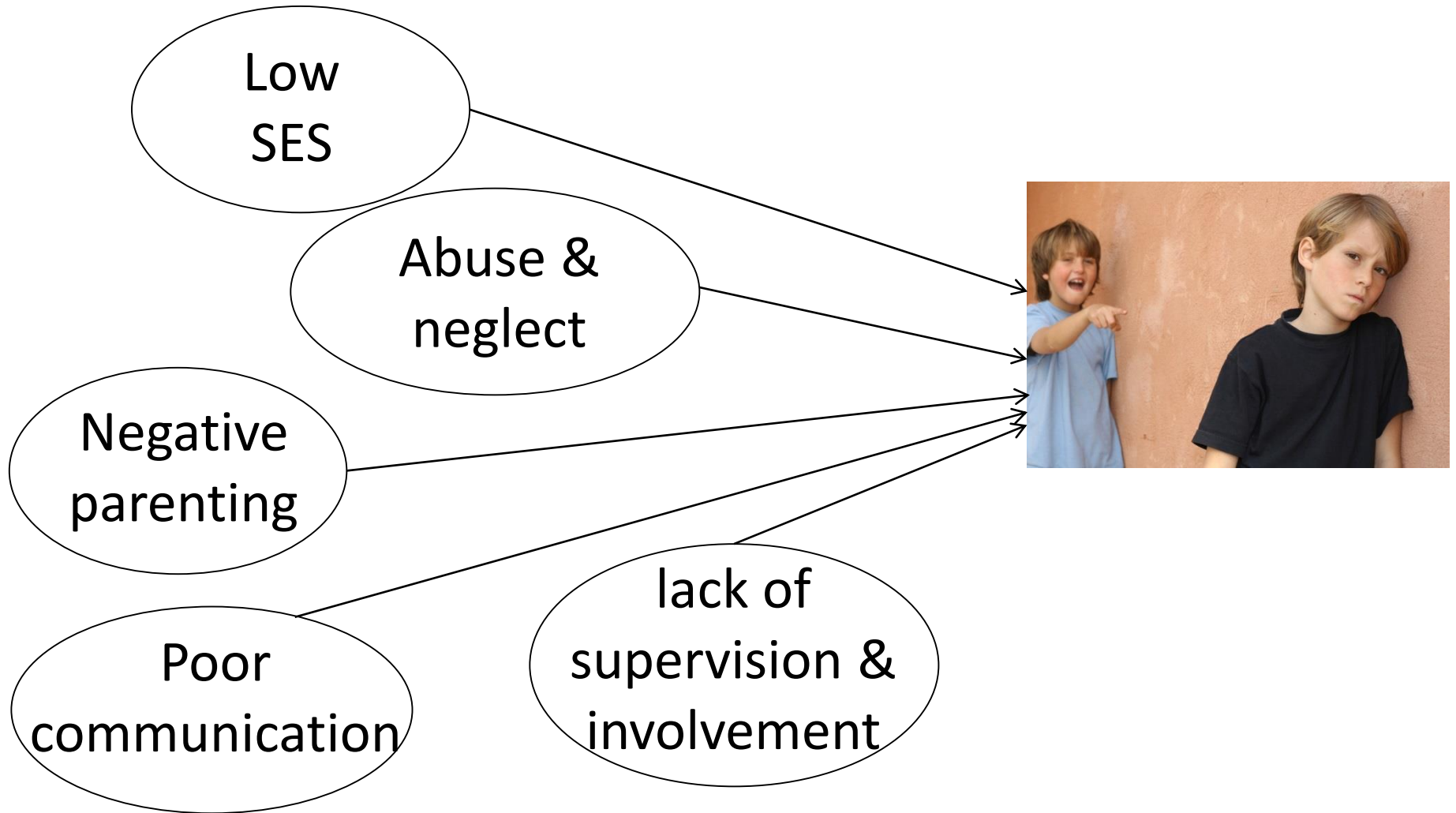
- Common among children and adolescents
- Can be persistent across time
- Is widespread across different settings
- Can take various forms
- Knows no boundaries
- Evolves with its time



We can predict who will get bullied



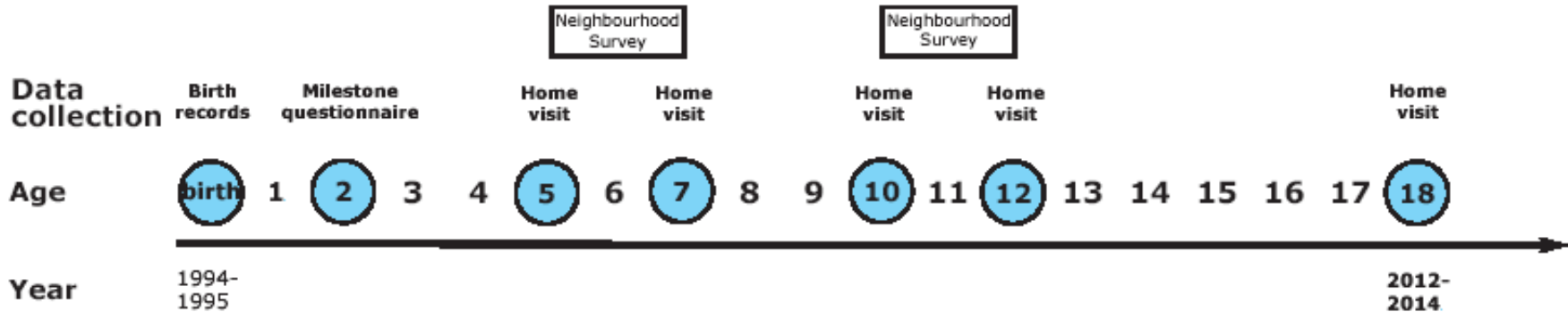
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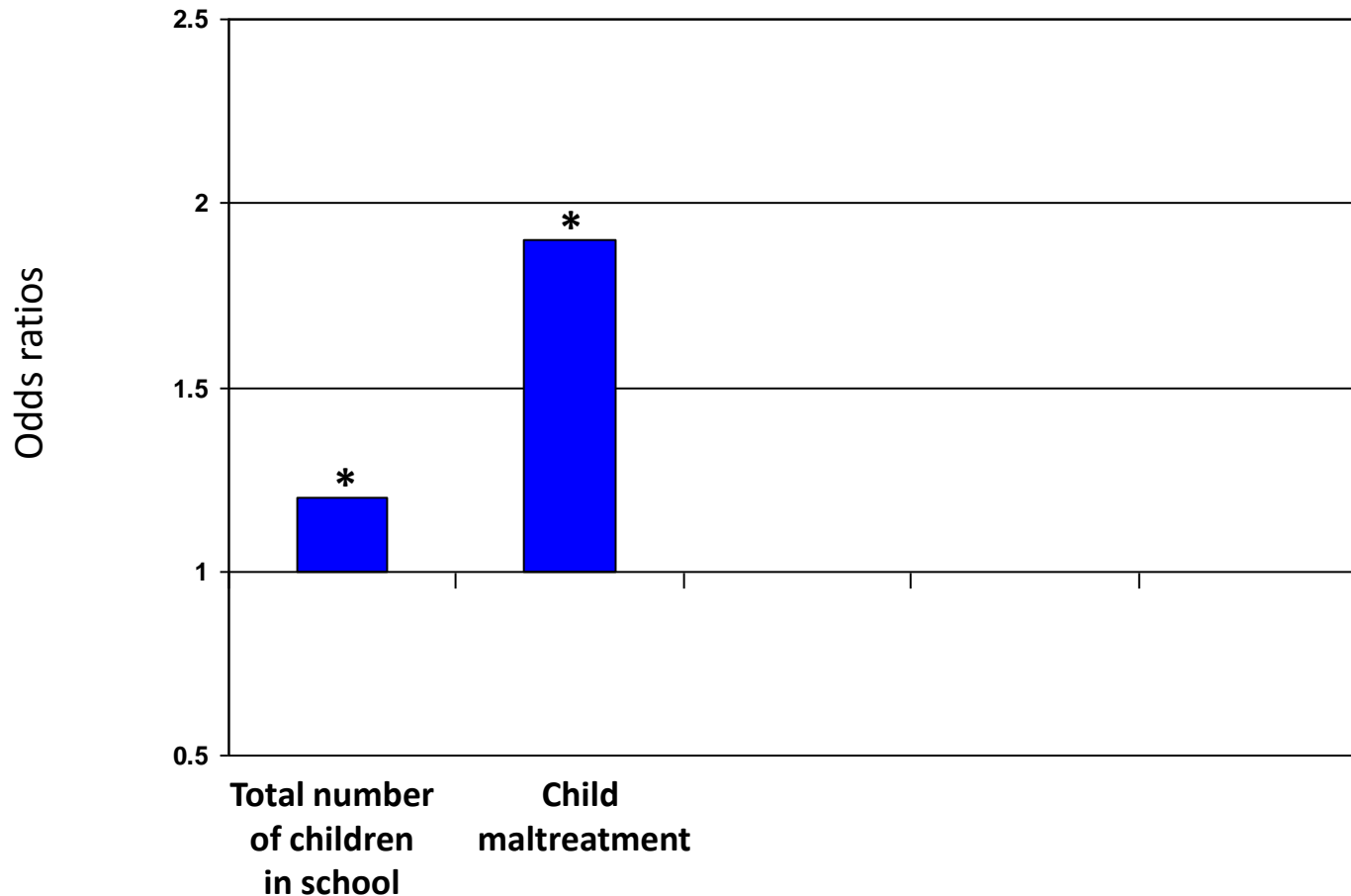


The Environmental Risk (E-Risk) Longitudinal Twin Study

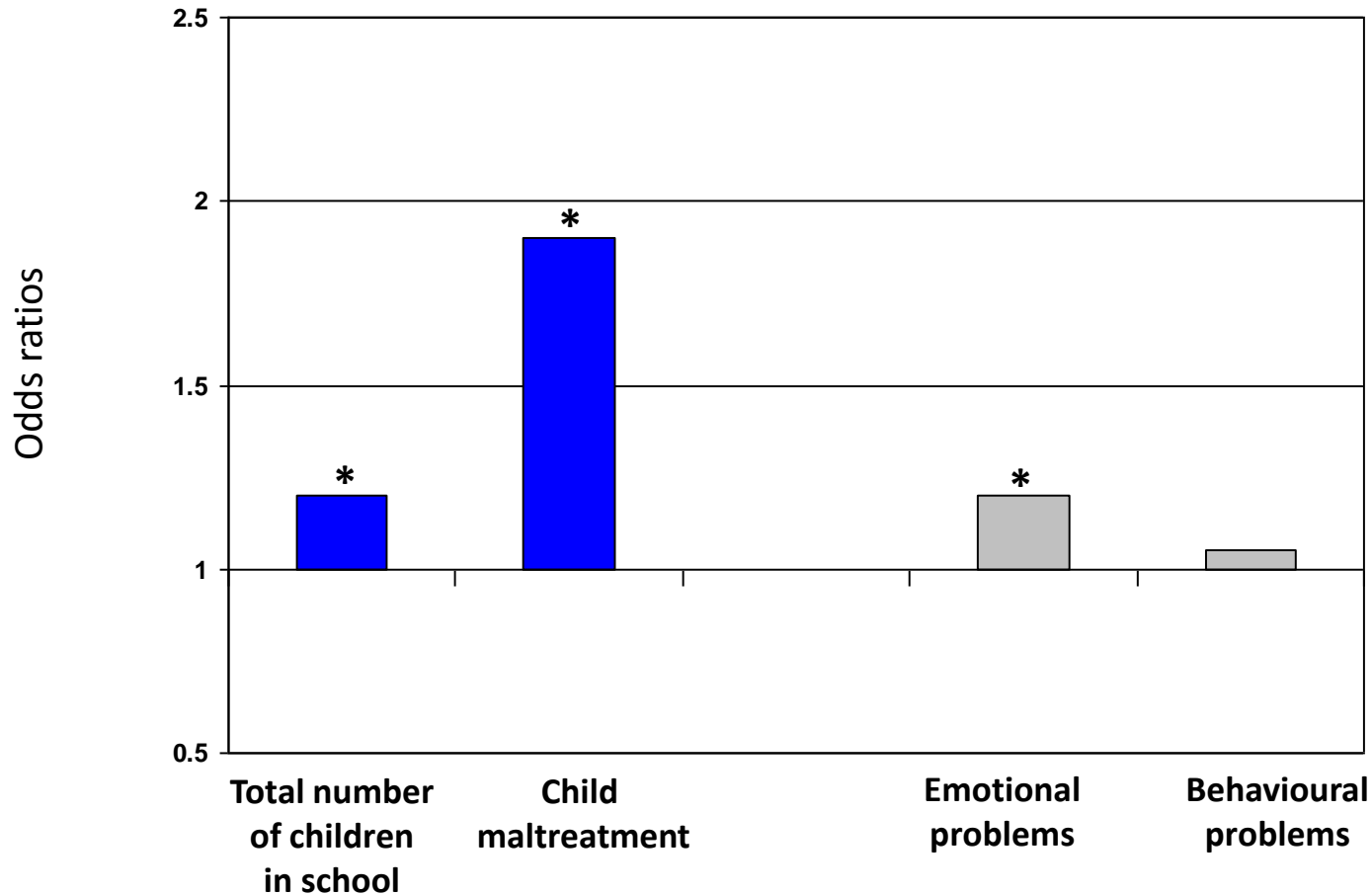
Design of the E-Risk Study: Data collection ages are circled



Factors uniquely associated with being a victim of bullying



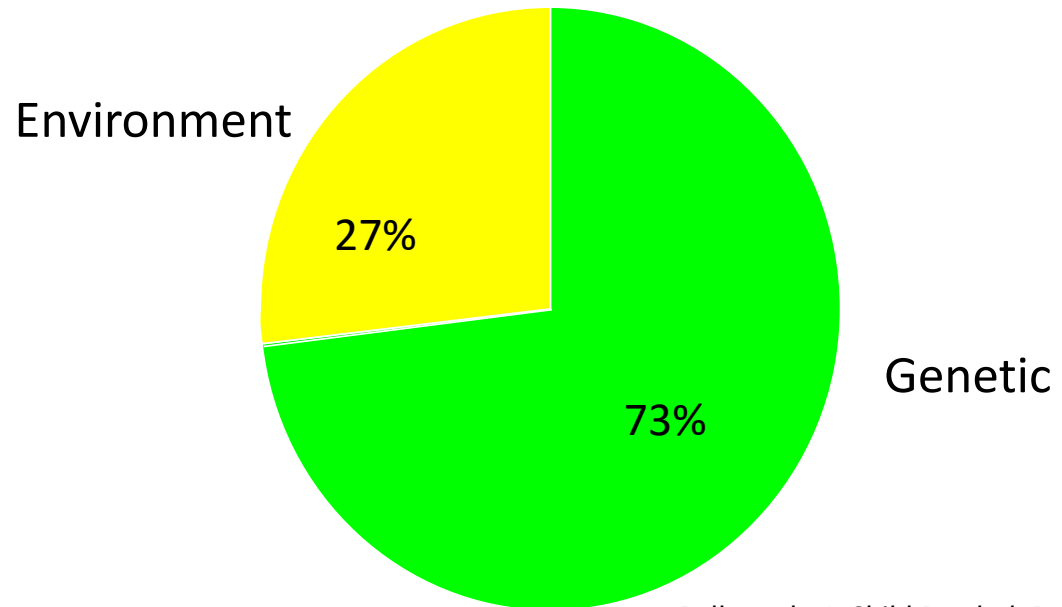
Factors uniquely associated with being a victim of bullying



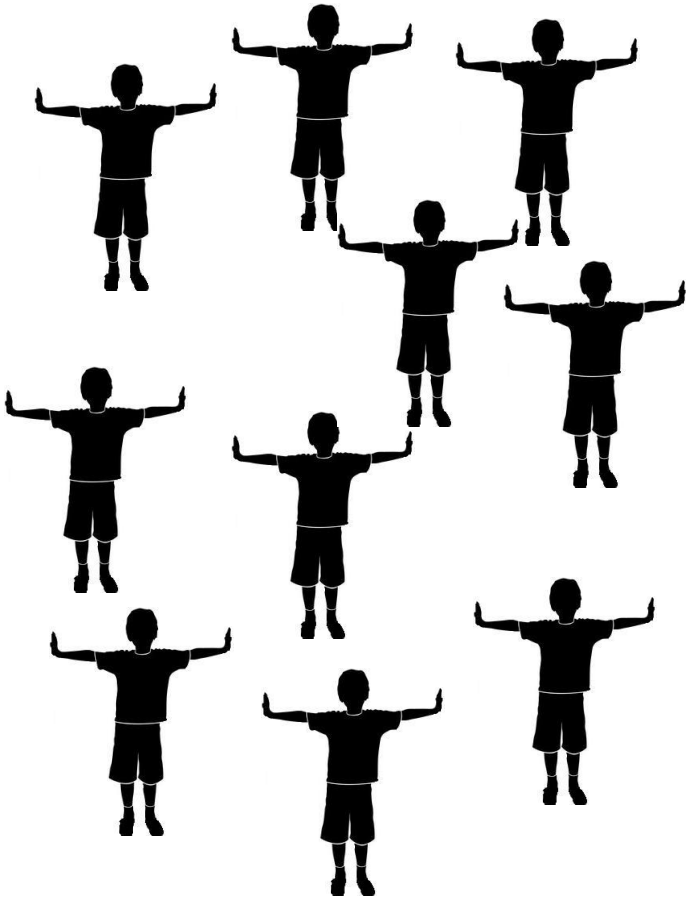
Heritability of bullying victimization

r (victimisation)

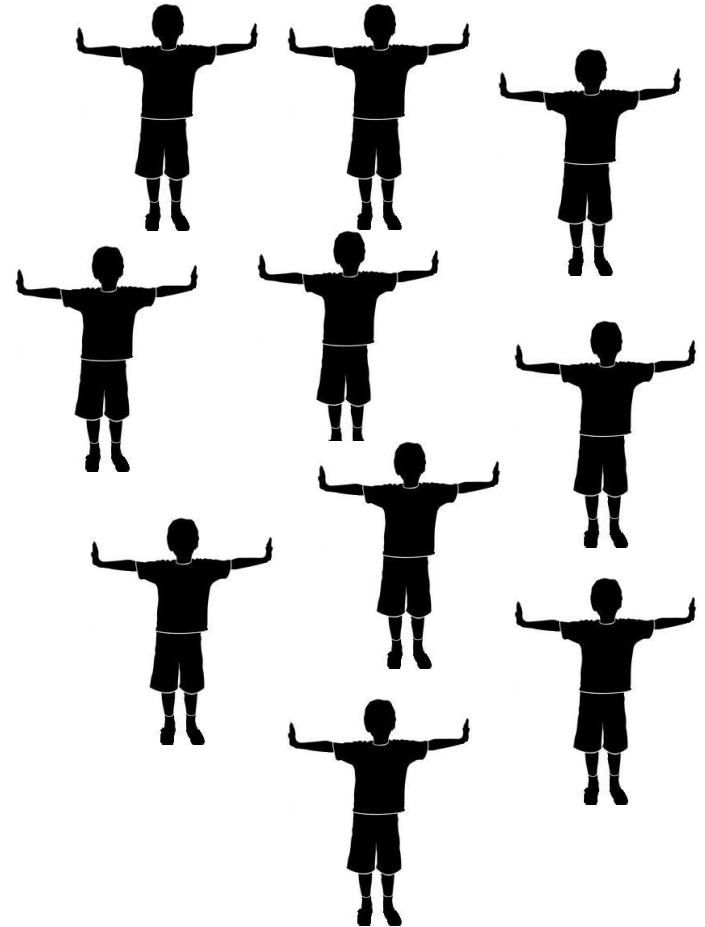
Cross-twin MZ	0.72
Cross-twin DZ	0.38



Random assignment



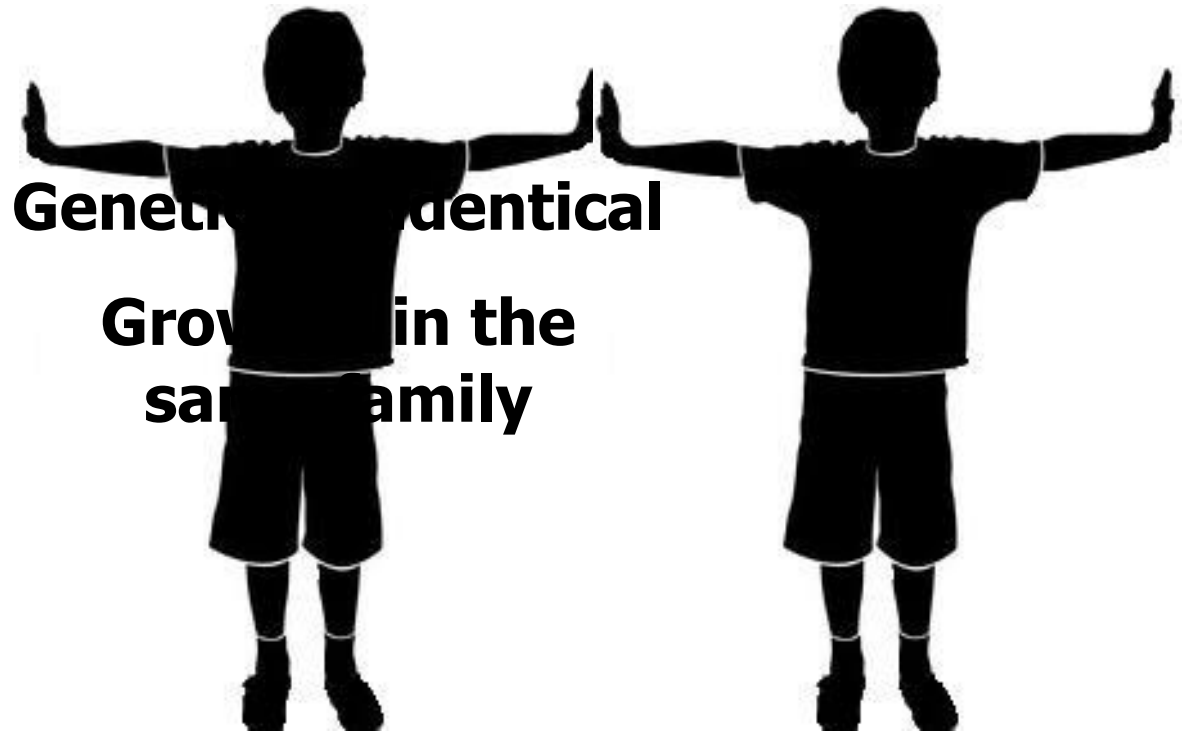
Early Adversity



Good Environments

The Discordant MZ-twin design

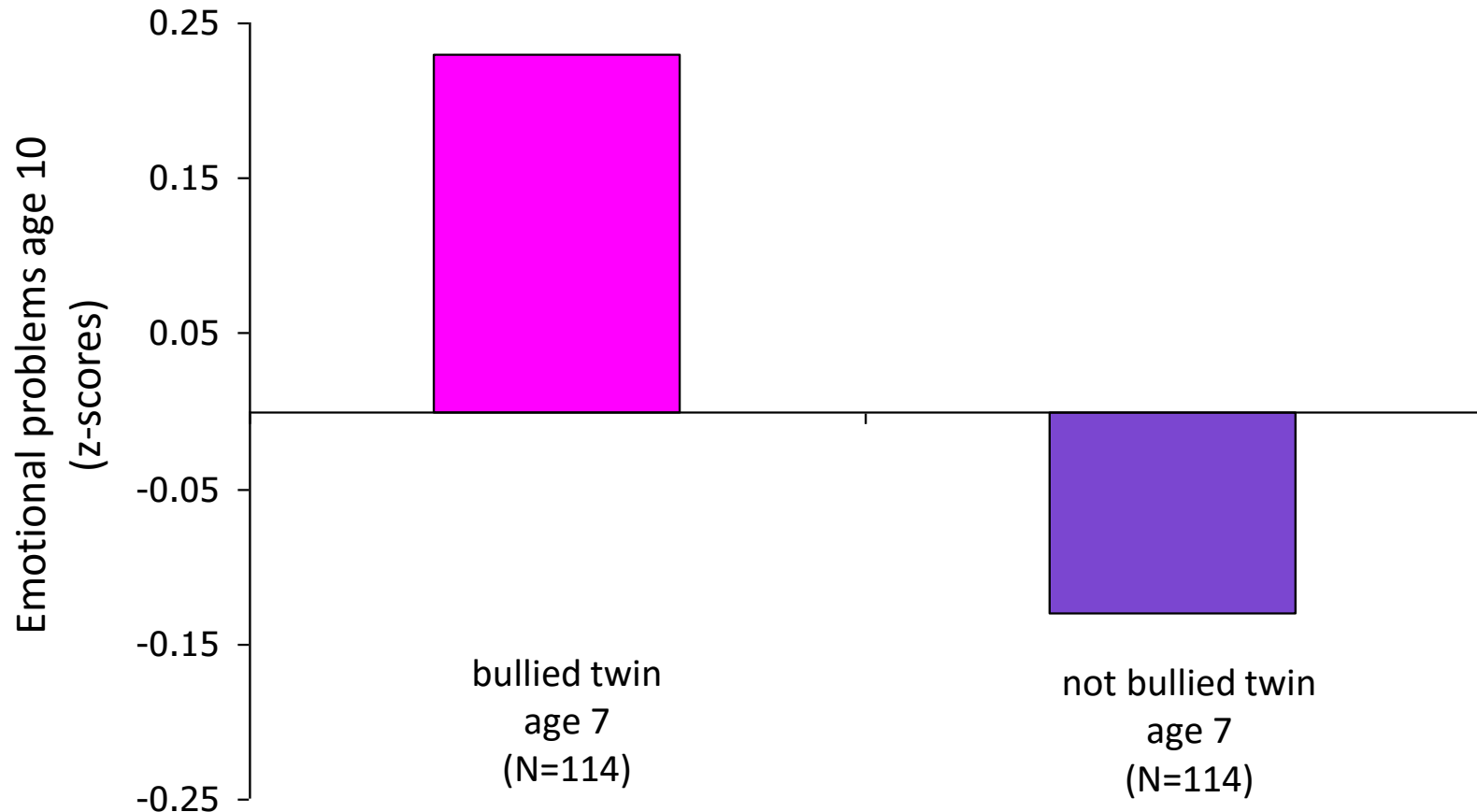
MZ twins



Bullied

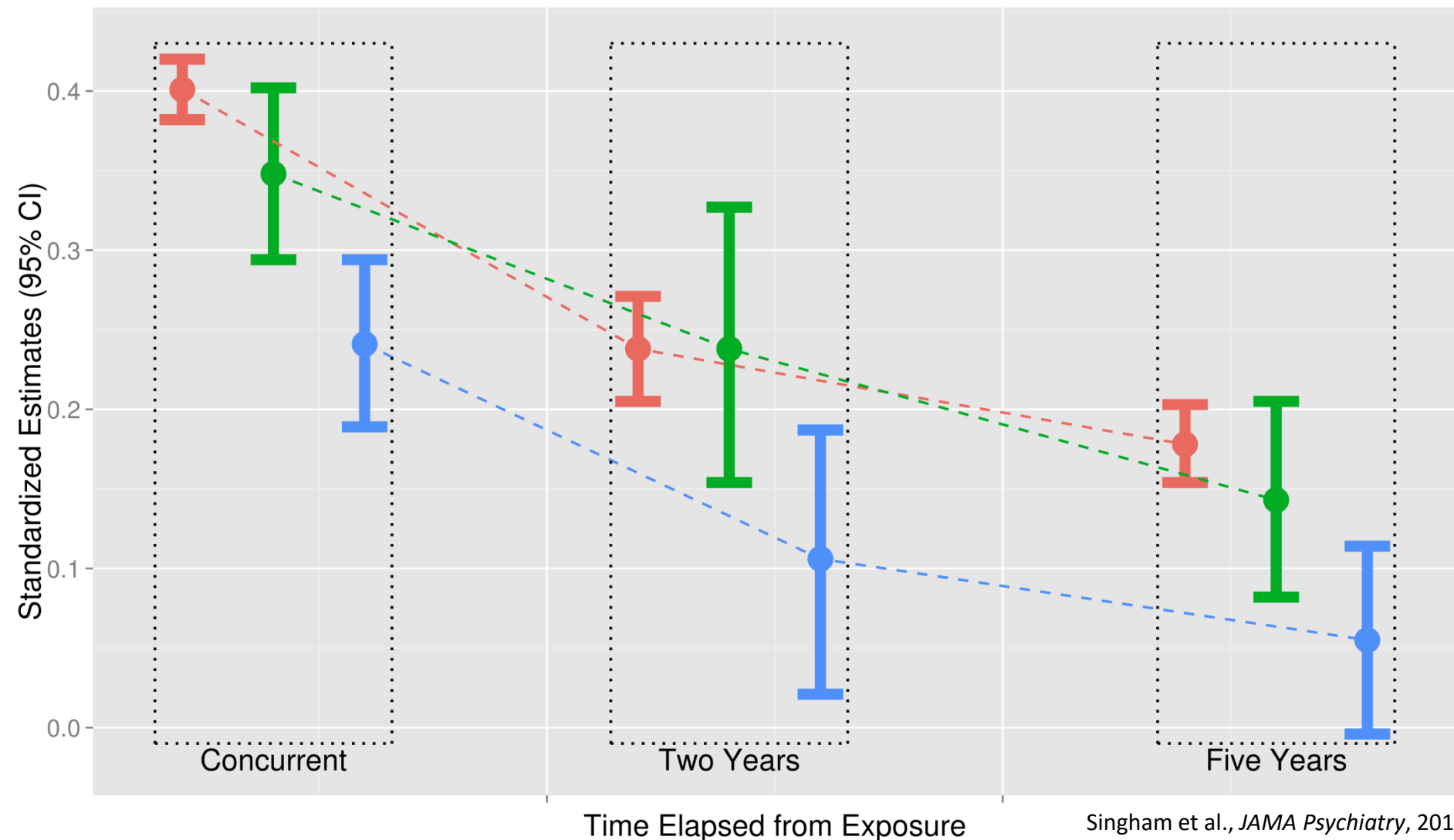
Not bullied

Being bullied leads to emotional problems, over and above the effect of family-wide factors including genes



Impact of victimisation on total difficulties across time

● 1. Phenotypic ● 2. DZ Twins ● 3. MZ Twins



Psychiatric outcomes of bullying victimization: a study of discordant monozygotic twins

J. L. Silberg^{1,2*}, W. Copeland³, J. Linker⁴, A. A. Moore^{2,5}, R. Roberson-Nay^{2,4} and T. P. York^{1,2}

¹Department of Human and Molecular Genetics, Virginia Commonwealth University School of Medicine, Richmond, Virginia, USA

²Virginia Institute for Psychiatric and Behavioral Genetics, Virginia Commonwealth University, Richmond, Virginia

³Department of Psychiatry and Behavioral Sciences, Duke University Medical Center, Durham, North Carolina, USA

⁴Department of Psychiatry, Virginia Commonwealth University School of Medicine, Richmond, Virginia, USA

⁵Center for Clin

	All twins (N = 2824)			MZ-discordant twins (N = 145)		
	Bullied twin	Non-bullied twin	OR (95% CI)	Bullied MZ twin	Non-bullied MZ co-twin	OR (95% CI)
Childhood						
psychopathology						
Major depression	18 (4%)	67 (3%)	1.1 (0.67–1.5)			
Social anxiety	114 (27%)	355 (14%)	1.6* (1.3–2.1)	36 (27%)	25 (18%)	1.7** (1.0–2.7)
Separation anxiety	58 (14%)	190 (8%)	1.7* (1.2–2.3)	21 (15%)	12 (8%)	1.9** (0.89–3.7)
Suicidal ideation	82 (8%)	34 (3%)	1.7*** (1.2–2.3)	9 (6%)	7 (5%)	1.3 (0.47–3.6)
Overanxious disorder	43 (32%)	37 (27%)	0.55 (0.44–0.66)			
Oppositional defiant disorder	40 (9%)	173 (7%)	1.1 (0.71–1.4)			
Conduct disorder	35 (8%)	192 (8%)	0.82 (0.57–1.2)			
ADHD	27 (7%)	83 (4%)	1.8* (1.1–2.9)	7 (5%)	0 1 (0.75%)	7.2** (1.2–45.3)

OR, Odds ratio; CI, confidence interval; MZ, monozygotic; ADHD, attention deficit hyperactivity disorder.

* $p < 0.001$, ** $p < 0.05$, *** $p < 0.01$.

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Young adult						
psychopathology						
Major depression	111 (33%)	512 (27%)	1.3** (1.0–1.9)	36 (30%)	30 (26%)	0.70 (0.12–2.2)
Generalized anxiety	467 (24%)	85 (25%)	1.0 (0.79–1.3)			
Panic attacks	38 (11%)	142 (7%)	1.6** (1.1–2.4)	11 (9%)	8 (7%)	1.3 (.53–3.6)
Young adult suicidal ideation	38 (11%)	119 (6%)	1.9*** (1.3–3.0)	14 (12%)	5 (4%)	2.9*** (1.2–7.2)
Antisocial personality	11 (3%)	74 (4%)	0.96 (.50–1.9)			

OR, Odds ratio; CI, confidence interval; MZ, monozygotic; ADHD, attention deficit hyperactivity disorder.

* $p < 0.001$, ** $p < 0.05$, *** $p < 0.01$.

Persistent impact of being bullied in childhood

Table 1. Associations Between Bully-Victim Groups and Young Adult Psychiatric Outcomes^a

Outcome	Weighted % of Participants per Group				Victim vs Neither, OR (95% CI)	P Value	Bully/Victim vs Neither, OR (95% CI)	P Value	Bully vs Neither, OR (95% CI)	P Value
	Neither (n = 789)	Bully (n = 100)	Victim (n = 305)	Bully/Victim (n = 79)						
Depressive disorders	3.3	5.0	10.2	21.5	3.4 (1.5-7.9)	.004	8.2 (2.6-25.5)	<.001	1.6 (0.6-4.1)	.36
Suicidality	5.7	2.0	9.0	24.8	1.6 (0.7-4.0)	.29	5.5 (1.7-17.4)	.004	0.3 (0.1-1.2)	.10
Anxiety disorders	6.3	12.5	24.2	32.2	4.7 (2.5-9.1)	<.001	7.1 (2.6-18.8)	<.001	2.1 (0.7-6.3)	.18
Generalized anxiety	3.1	9.1	10.2	13.6	3.6 (1.4-9.3)	.008	5.0 (1.4-18.5)	.02	3.2 (0.8-13.5)	.11
Panic disorder	4.6	5.8	13.1	38.4	3.2 (1.5-6.7)	.002	13.1 (5.0-34.1)	<.001	1.3 (0.5-3.2)	.56
Agoraphobia	2.3	2.7	11.1	10.3	5.3 (2.0-13.9)	<.001	4.9 (1.0-23.6)	.04	1.2 (0.3-4.2)	.78
Antisocial personality disorder	2.1	9.4	0.5	2.6	0.3 (0.1-1.1)	.06	1.3 (0.3-5.3)	.74	4.9 (1.0-23.3)	.04
Alcohol disorders	16.4	29.0	15.6	22.9	1.0 (0.5-1.7)	.83	1.5 (0.6-4.1)	.41	2.1 (0.9-4.8)	.09
Marijuana disorder	15.9	24.8	14.7	16.1	0.9 (0.5-1.7)	.77	1.0 (0.4-2.9)	.97	1.8 (0.8-4.0)	.19

^a Participants were categorized as bullies only, victims only, bullies and victims (hereafter referred to as bullies/victims), or neither. The odds ratios (ORs) and 95% CIs in bold are significant at $P < .05$.

National Child Development Study (NCDS) *1958 British Cohort*



N = 18,558

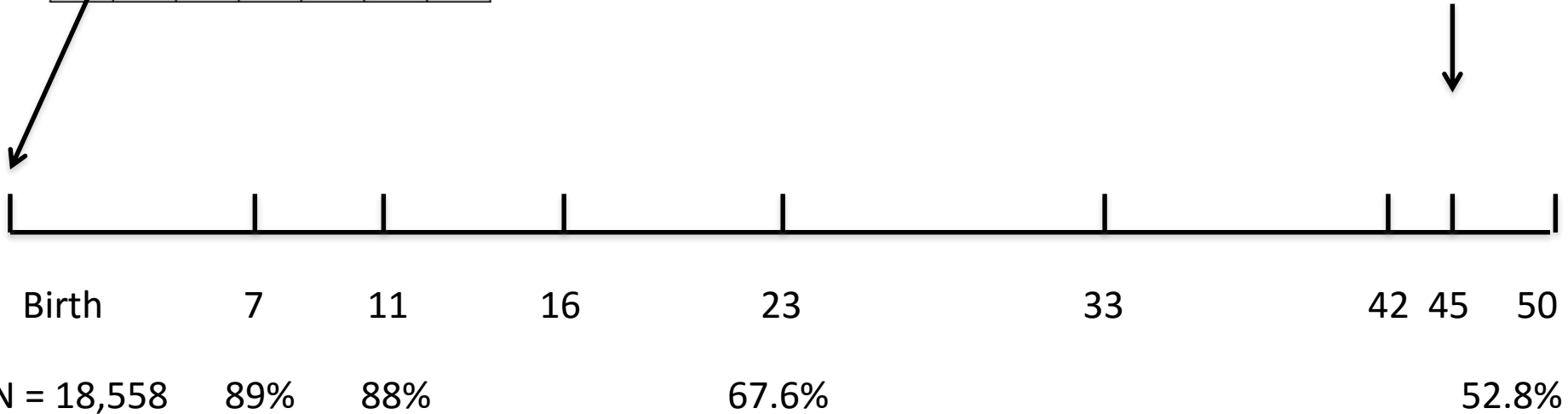
National Child Development Study (NCDS)

1958 British Cohort

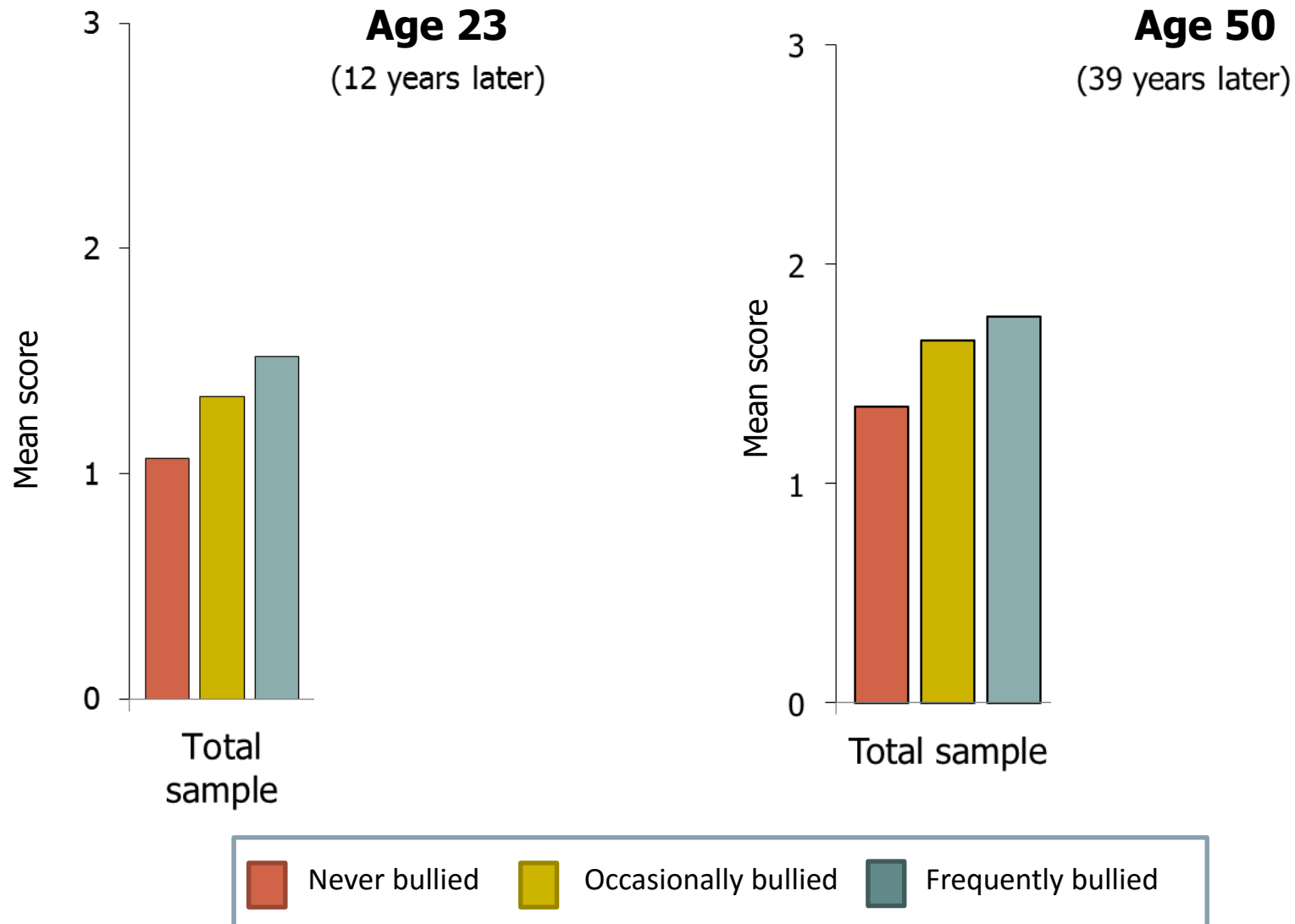
1958

SUN	MON	TUE	WED	THU	FRI	SAT
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28		

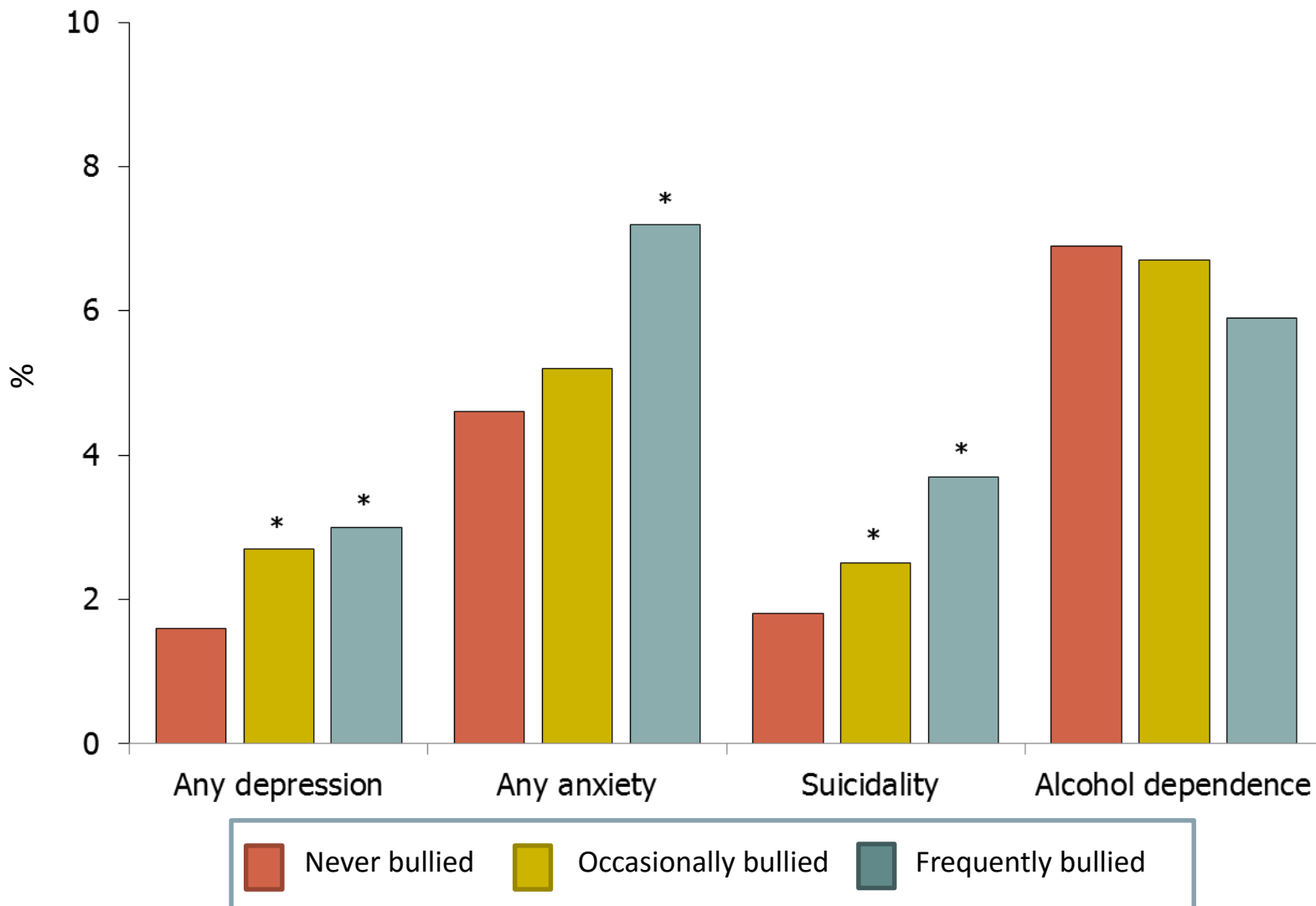
Biomedical survey
N = 9,377



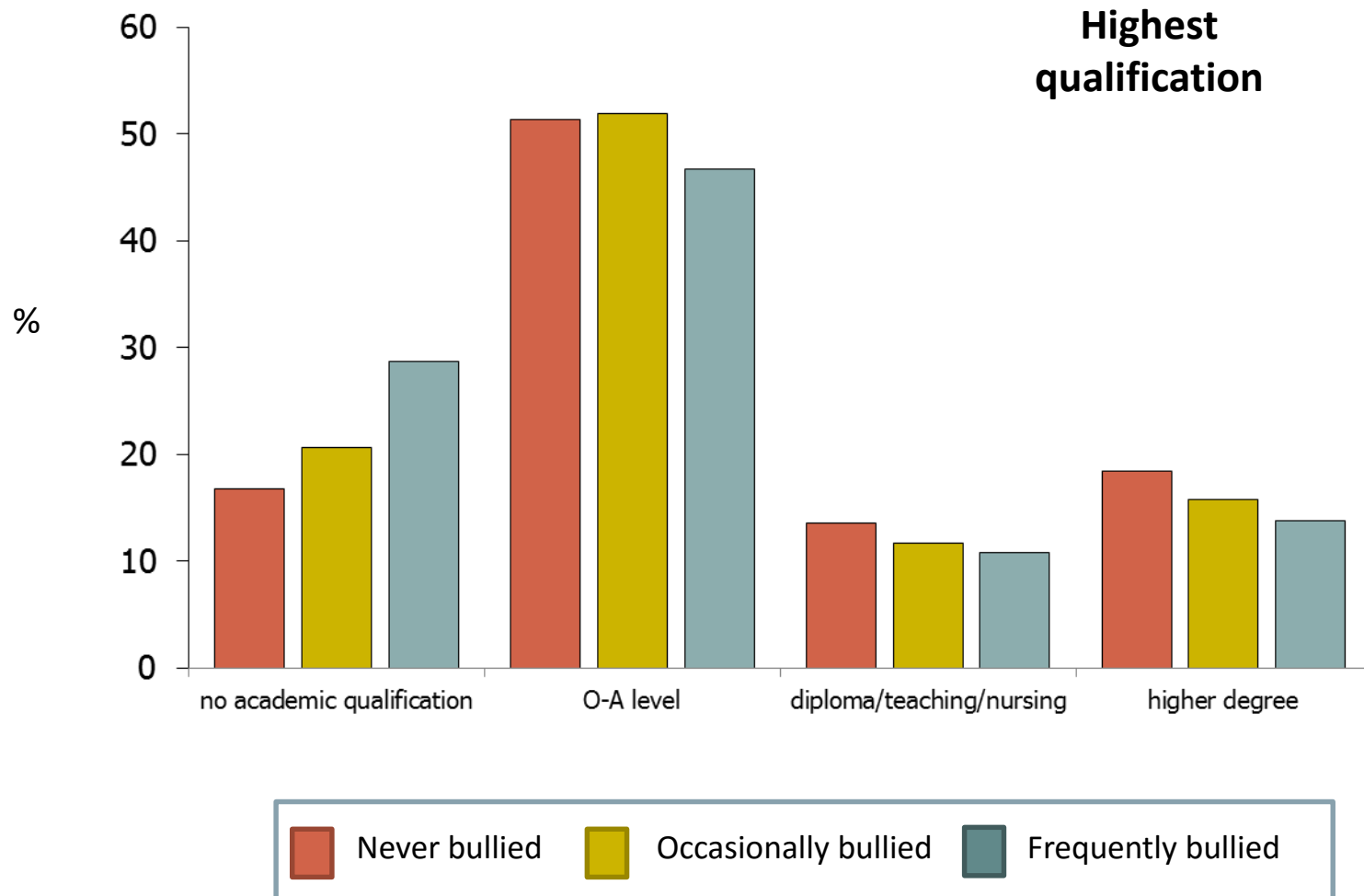
Being bullied in childhood is associated with psychological distress in adulthood



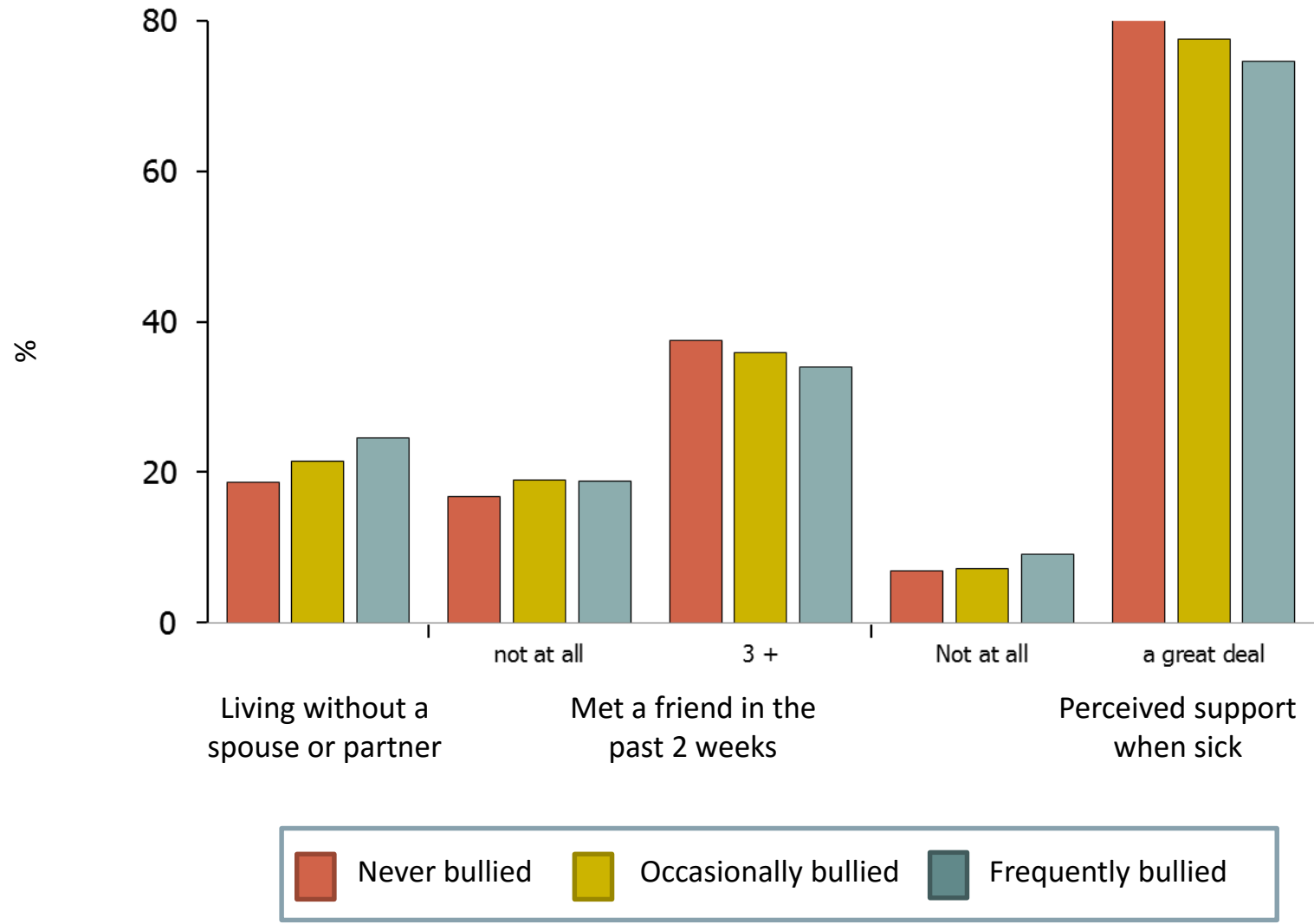
Being bullied and psychiatric outcomes age 45



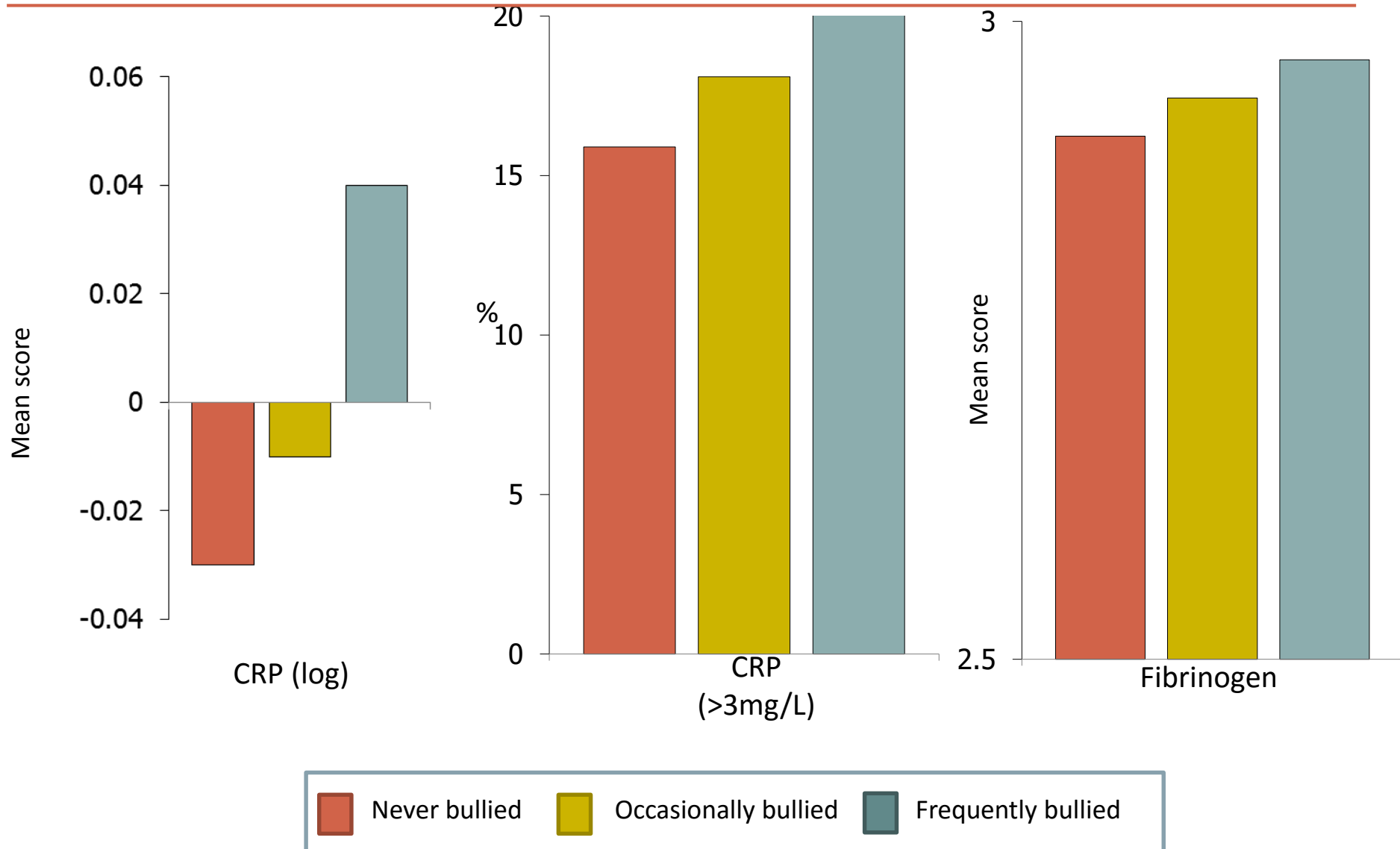
Being bullied and socio-economic outcomes in adulthood



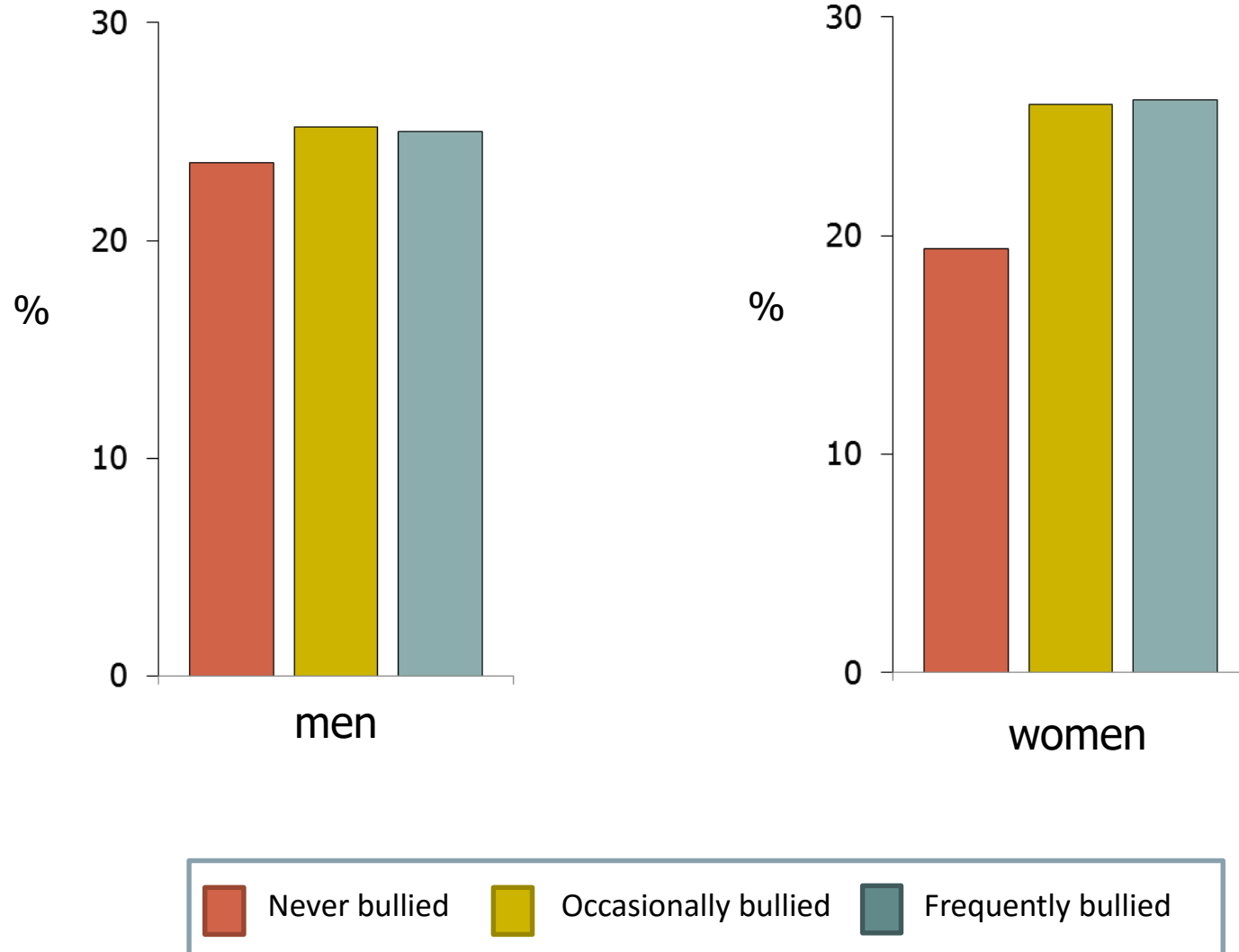
Being bullied and social relationships in adulthood



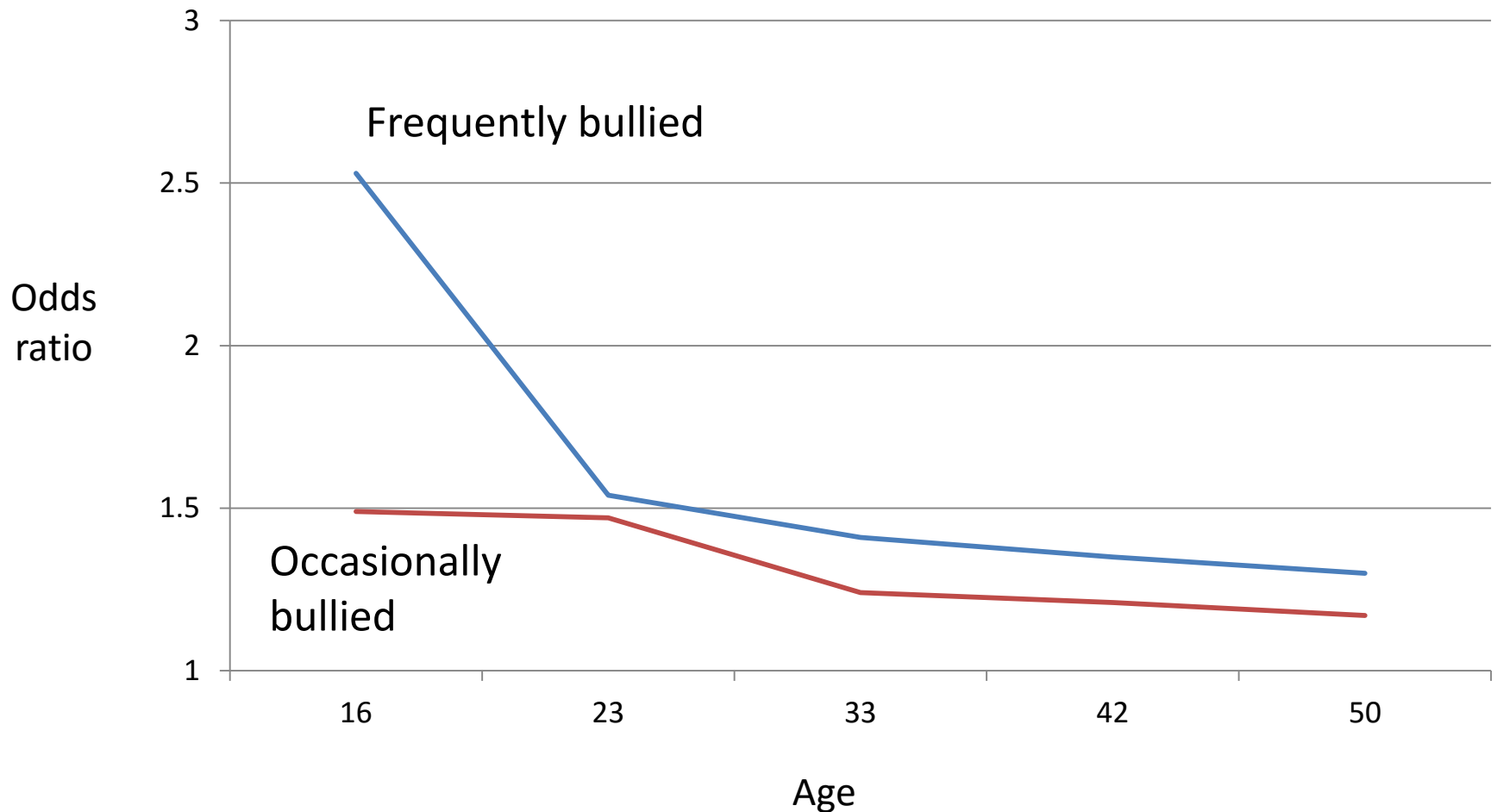
Being bullied in childhood and markers of inflammation at age 45



Being bullied in childhood and obesity in adulthood



Prevalence of specialty mental health service use for individuals who were frequently and occasionally bullied



Lessons for intervention

BULLYING

The word "BULLYING" is written in a bold, black, sans-serif font. A large, red prohibition sign, consisting of a circle with a diagonal slash from the top-left to the bottom-right, is centered over the word, effectively striking through it.

Lessons for policy



The Policy Institute at King's

Thank you!

MRC

Medical
Research
Council



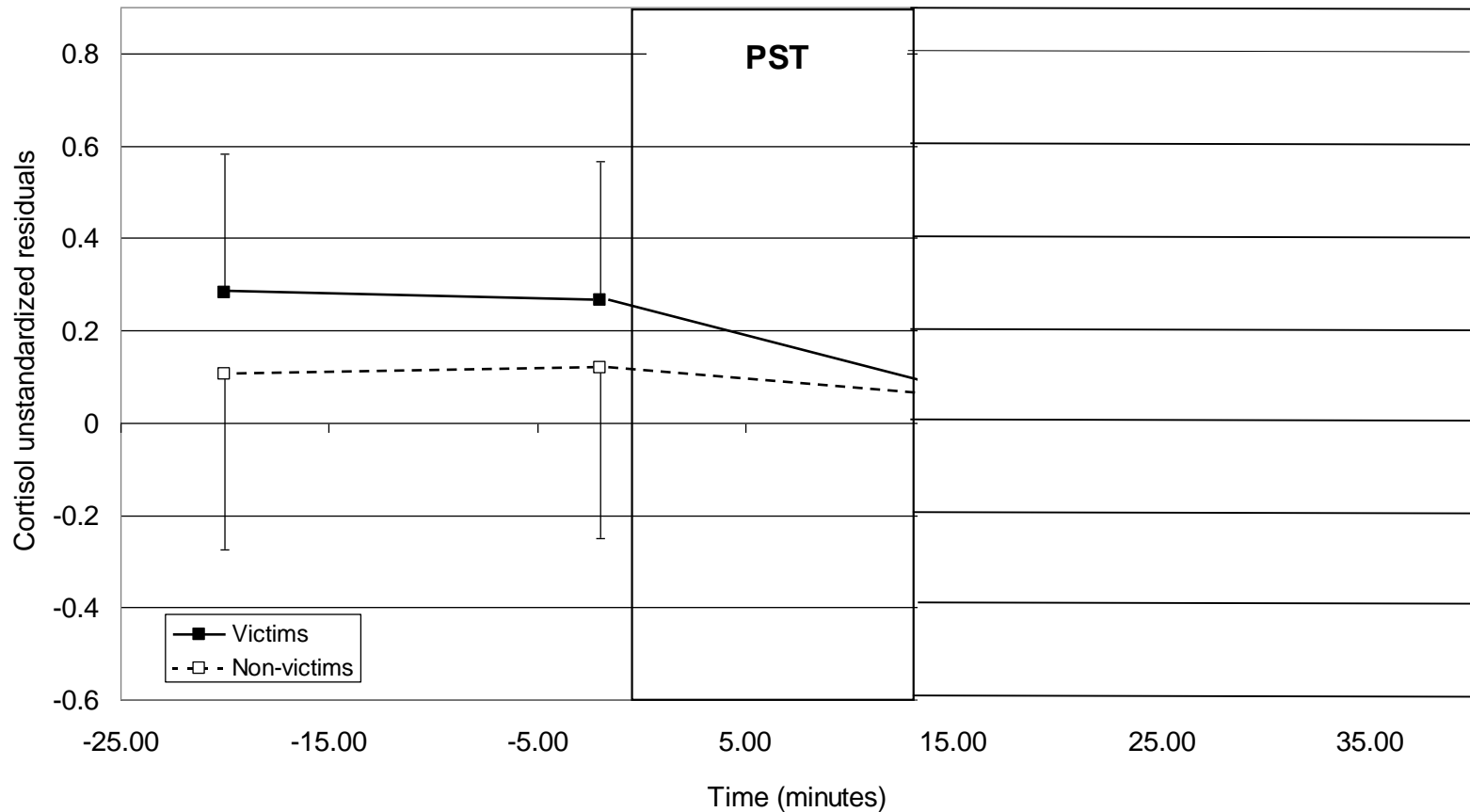
Thank you to the



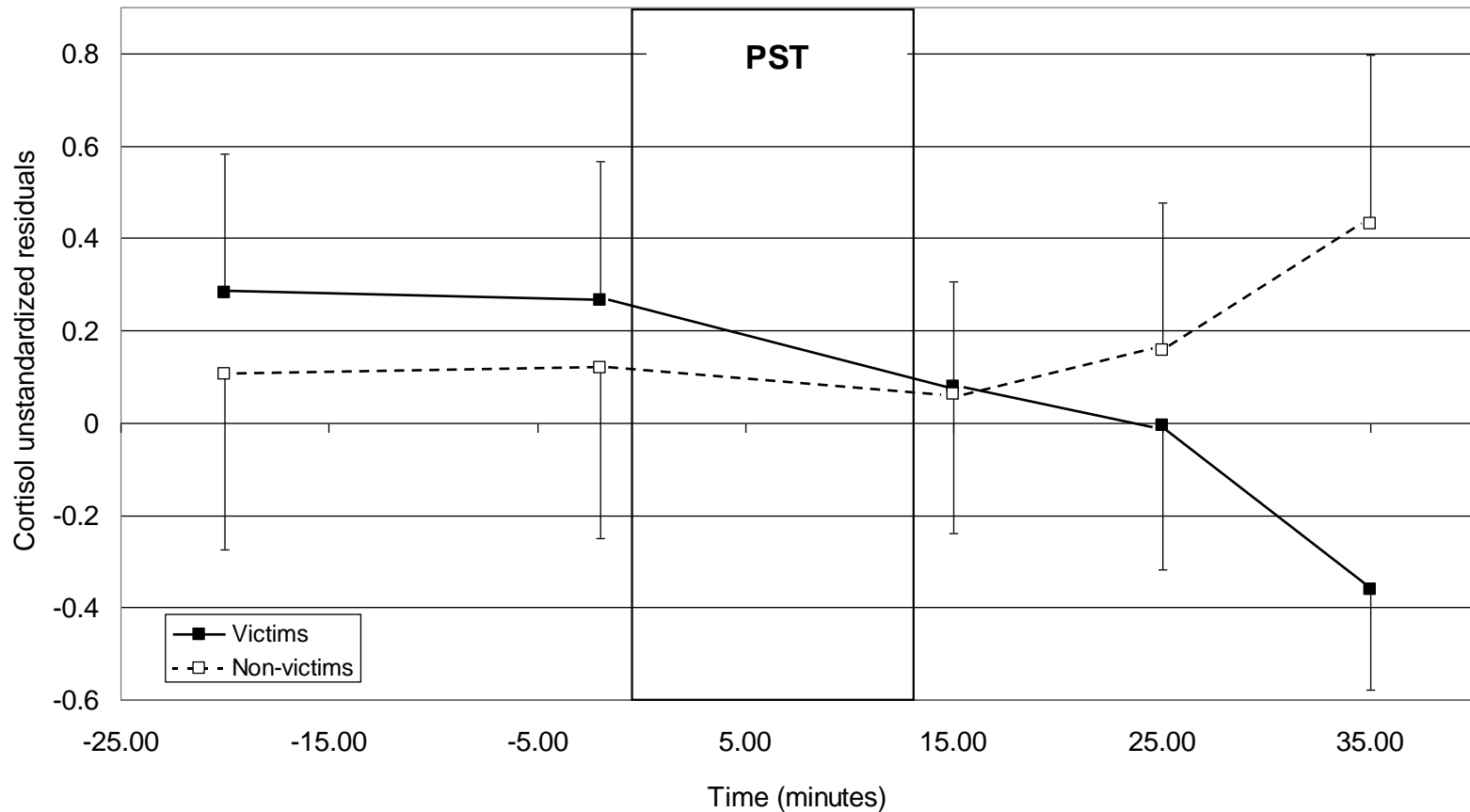
E-Risk Team
NCDS Team



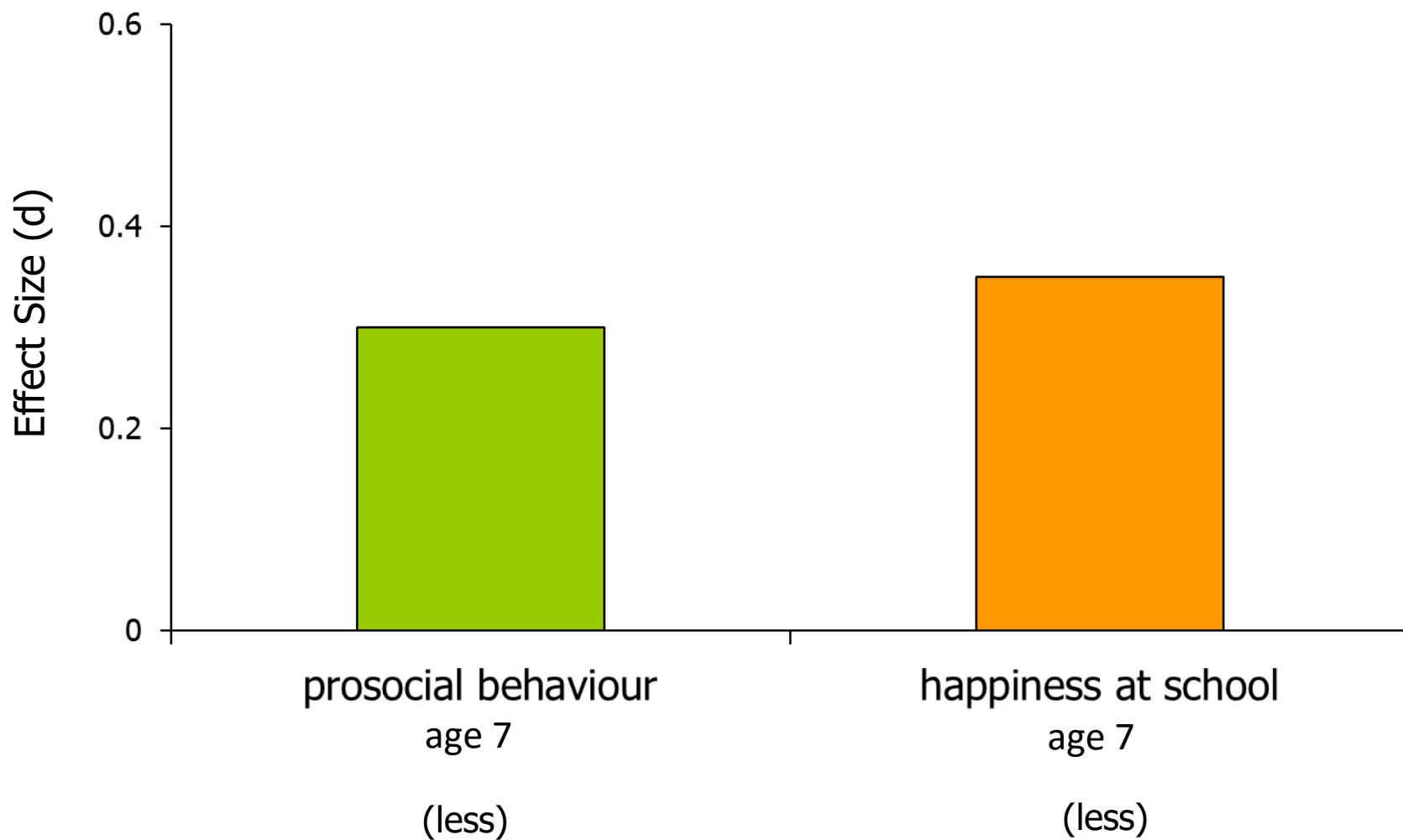
Cortisol response in bullied and non-bullied MZ twins



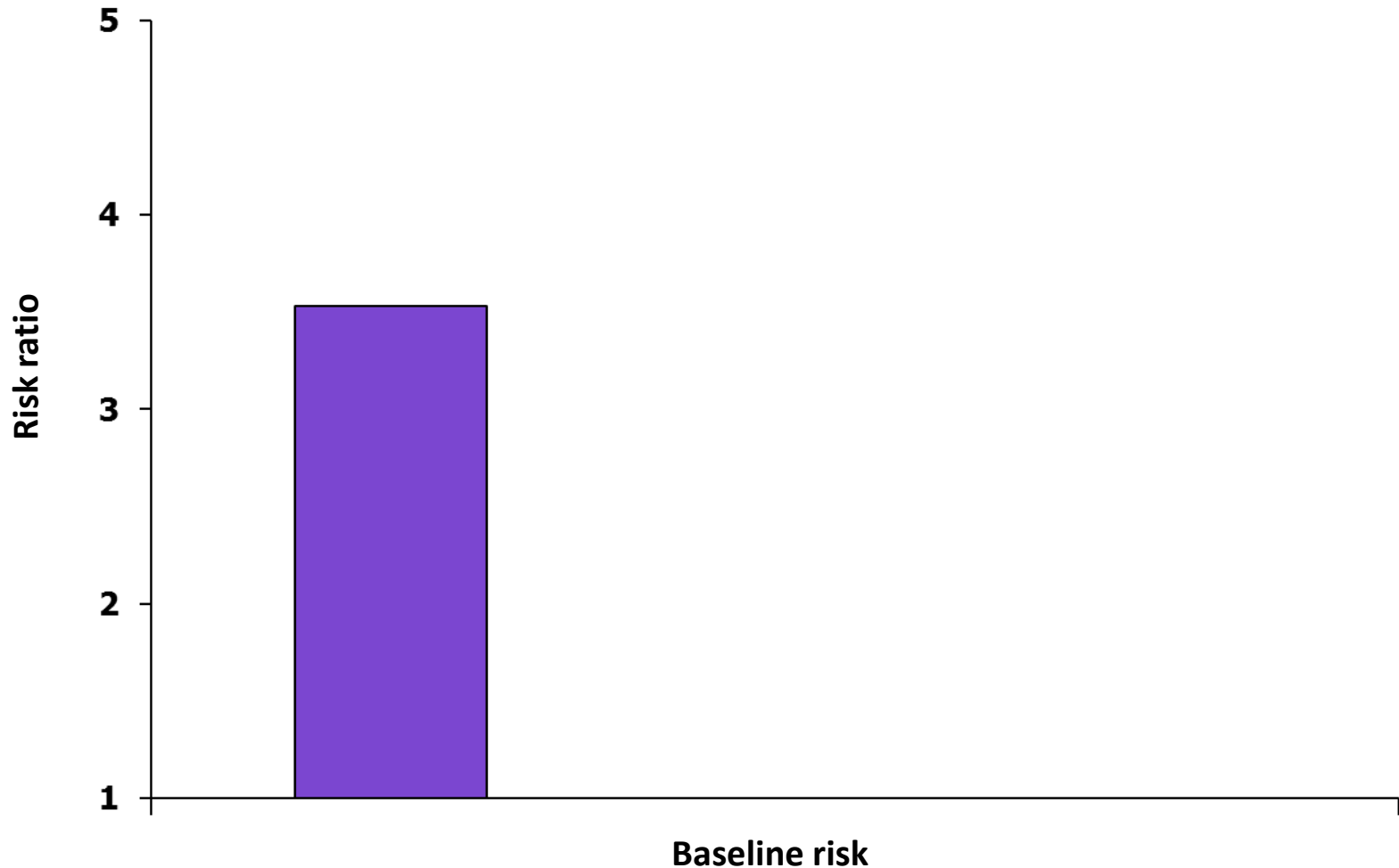
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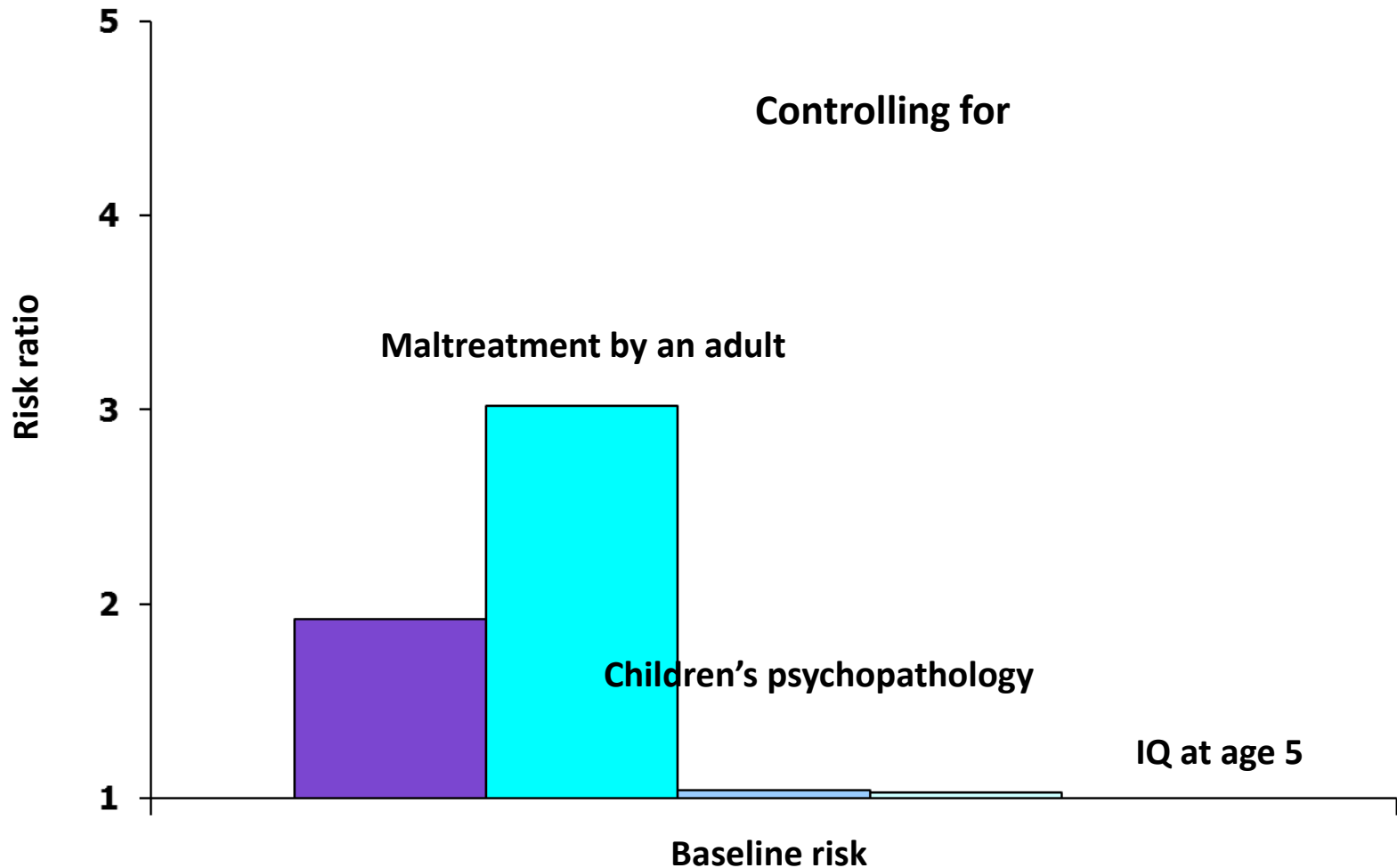
Being bullied is associated with adjustment problems



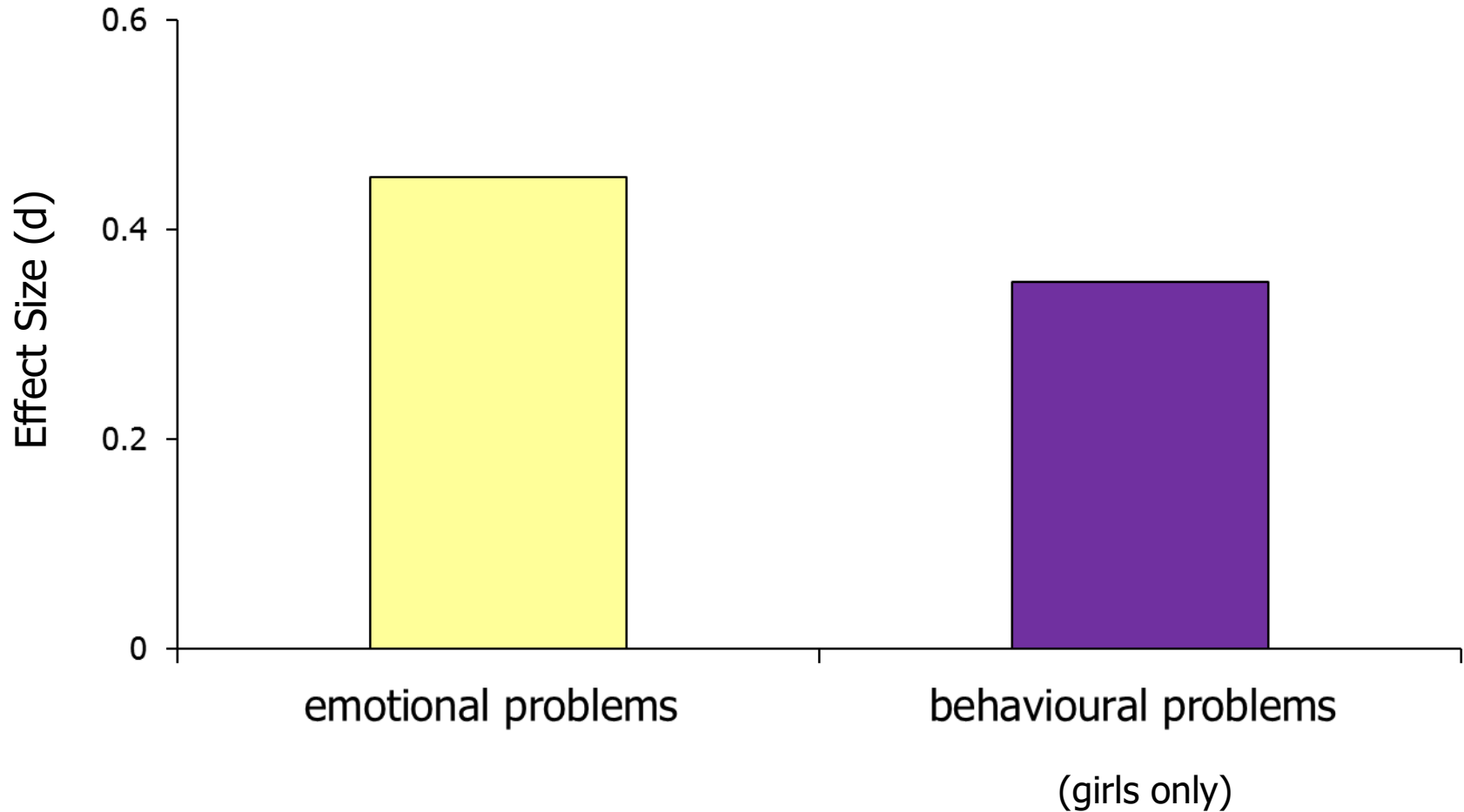
Being frequently bullied is associated with self harm



Being frequently bullied is associated with self harm



Being bullied is associated with symptoms of mental health problems



Impact of past year victimisation on anxiety across raters

● 1. Phenotypic ● 2. DZ Twins ● 3. MZ Twins

