

## Victims of childhood bullying at higher risk of cardiovascular disease in later life

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People who experienced bullying in childhood are more likely to be overweight and show higher levels of blood inflammation in later life, finds new research from the Institute of Psychiatry, Psychology & Neuroscience (IoPPN) at King's College London. This puts them at higher risk of heart attack and various age-related conditions, including type-2 diabetes, according to the study authors.

The findings are based on data from the British National Child Development Study (NCDS), a long-term study of all children born in England, Scotland and Wales during one week in 1958. The study, published today in *Psychological Medicine*, includes 7,102 children whose parents provided information on their child's exposure to bullying when they were aged 7 and 11. Measures of blood <u>inflammation</u> and obesity were obtained from information and samples collected when



participants were aged 45.

Professor Louise Arseneault, senior author from the IoPPN at King's College London, said: 'Our research has already shown a link between childhood bullying and risk of mental health disorders in children, adolescents and adults, but this study is the first to widen the spectrum of adverse outcomes to include risks for <u>cardiovascular disease</u> at mid-life. Evidently, being bullied in childhood does get under your skin.'

Researchers found that 26 per cent of women who had been occasionally or frequently bullied in childhood were obese at the age of 45, compared to 19 per cent of those who had never been bullied. A second measure of abdominal fat was calculated by dividing waist measurements by hip size (waist-hip ratio). Both men and women who suffered childhood bullying showed greater waist-hip ratio at 45 years old than non-bullied participants. Findings remained significant when controlling for childhood risk factors including parental social class, participants' BMI and psychopathology and also key adult variables such as social class, smoking, diet and exercise.

Frequent bullying in childhood also led to <u>higher levels</u> of inflammation at mid-life in men and women. Researchers found that 20 per cent of those who had been frequently bullied, compared to 16 per cent of those who had never been bullied, had C-reactive protein (CRP) levels of more than 3mg/L. High CRP levels increase risk of heart disease by promoting atherosclerosis, a condition where arteries become clogged up by fatty substances. Those who were frequently bullied in childhood also had raised levels of fibrinogen, a protein which promotes the formation of blood clots.

Bullying is characterised by repeated hurtful actions by other children, where the victim finds it difficult to defend themselves. In the NCDS, 28 per cent of participants were bullied occasionally in childhood and 15



per cent were bullied frequently. These figures are consistent with prevalence rates of childhood bullying victimisation today.

Professor Louise Arseneault said: 'Bullying is a part of growing up for many children from all social groups. While many important school programmes focus on preventing bullying behaviours, we tend to neglect the victims and their suffering. Our study implies that early interventions in support of the bullied children could not only limit psychological distress but also reduce physical health problems in adulthood.'

Dr Andrea Danese, a co-author from the IoPPN at King's, said: 'Taking steps to tackle obesity and high blood inflammation is important because both can lead to serious and potentially life-threatening conditions, such as type-2 diabetes and cardiovascular disease.

'The effects of being bullied in childhood on the risk for developing poor health later in life are relatively small compared to other factors. However, because obesity and <u>bullying</u> are quite common these days, tackling these effects may have a real impact.'

He added: 'The main focus of prevention for age-related disease has traditionally been on unhealthy adult behaviours, such as smoking, physical inactivity, and poor diet. These are clearly important but our research highlights the need to trace the roots of these lifelong risk trajectories back to psychosocial experiences in <a href="mailto:childhood.">childhood.</a>'

**More information:** 'Bullying victimization in childhood predicts inflammation and obesity at mid-life: a five-decade birth cohort study' *Psychological Medicine* DOI: 10.1017/S0033291715000653

Provided by King's College London



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