

Impact case study (REF3)

Institution: Liverpool John Moores University (LJMU)		
Unit of Assessment: UOA3		
Title of case study: Preventing and mitigating the impacts of adverse childhood experiences across the United Kingdom (UK) and beyond		
Period when the underpinning research was undertaken: 2011-2019		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
MA Bellis	Director CPH	1998-2016
KE Hughes	Professor in Behavioural Epidemiology	1999 -2016
L Jones	Reader in Public Health Evidence	2005-present
Z Quigg	Professor in Behavioural Epidemiology	2003-present
Period when the claimed impact occurred: 2014-2020		
Is this case study continued from a case study submitted in 2014? N		
1. Summary of the impact		
<p>Preventing and responding to Adverse Childhood Experiences (ACEs) is a critical public health challenge, however prior to 2012 little UK evidence existed. Our original research has enhanced understanding of ACEs, which has been instrumental in advocating for, and implementing UK ACE prevention strategies (e.g. parenting programmes; whole-system approaches). Our evidence has enabled the prevention of ACEs to be recognised as a major public health priority across local/national governments in the UK, and our research is supporting international advocacy for prevention activity.</p>		
2. Underpinning research		
<p>For nearly a decade, the Public Health Institute (PHI), together with a range of stakeholders and academic collaborators, have been at the forefront of developing UK and international research relating to ACEs. ACEs include a range of stressful events that children can be exposed to while growing up, including: physical, sexual or emotional abuse; family breakdown; exposure to domestic violence; or living in a household affected by substance misuse, mental illness or where someone is incarcerated (R1).</p> <p>In 2012, PHI and Blackburn with Darwen Borough Council, implemented the first UK-based ACE population survey, providing insights into the nature, extent and risk factors for ACEs, and associations with health and well-being in adulthood (R1). To understand ACEs further, in 2013 PHI implemented the first representative population ACE survey across England (R2). Findings show that 47% of adults in England (around 15 million) have experienced one ACE, and 8% (around 2.7 million) more than 4 (R2). PHI and collaborators have implemented subsequent ACE surveys across populations in England (e.g. Luton/Hertfordshire/Northamptonshire) and Wales (whole population) (R4-5) and analysed ACE survey data across Eastern Europe. Combined, these studies have identified that individuals' childhood experiences are fundamental in determining their future health and social prospects, with ACEs being one of the strongest predictors of poor health and social outcomes in adults (R1-5). Our meta-analyses of global ACE studies (R6) corroborates our UK research, consistently linking ACEs to health-harming behaviours such as smoking, alcohol and drug use, risky sexual activity and violence; and to conditions such as mental illness, sexually transmitted infections, obesity, heart disease, cancers and, ultimately, premature mortality (R1-6). Importantly, the more ACEs children suffer the greater their risks of poor outcomes in later life (R1-6). These relationships also mean that individuals who have suffered ACEs can be vulnerable to exposing their own children to ACEs, leading to cycles of adversity that affect families across generations.</p>		

Our research highlights the societal impacts of ACEs. Evidence for England and Wales suggests that, compared to those with no ACEs, those with 4+ are more than twice as likely to utilise health services (i.e. GP, emergency departments, hospital) (R4). Higher healthcare use in those with 4+ ACEs (compared with none) was evident at 18-29 years of age and continued through to 50-59 years. Along with the acute impacts of ACEs on child health, a lifecourse perspective provides a compelling case for investing in safe and nurturing childhoods. Critically, our analyses of England and Wales ACE surveys suggests that building resilience in childhood may help mitigate the impacts of ACEs. Thus, whilst impacts increase with the number of ACEs experienced, such impacts may be substantively mitigated by always having support from an adult you trust in childhood (R6).

Findings from PHI research have provided insight into the extent and detrimental impacts of ACEs across UK and European populations. Our research programme is on-going, in the form of evaluations of interventions and evidence reviews of the international literature on prevention approaches.

3. References to the research

R1: **Bellis, M. A.**, Lowey, H., Leckenby, N., **Hughes, K.**, & Harrison, D. (2014). Adverse childhood experiences: retrospective study to determine their impact on adult health behaviours and health outcomes in a UK population. *Journal of Public Health*, 36(1), 81-91. (Altmetric score, 41; Citations, 215)

R2: **Bellis, M. A.**, **Hughes, K.**, Leckenby, N., Hardcastle, K. A., Perkins, C., & Lowey, H. (2014). Measuring mortality and the burden of adult disease associated with adverse childhood experiences in England: a national survey. *Journal of Public Health*, 37(3), 445-454. (Altmetric score, 59; Citations, 114)

R3: **Hughes, K.**, Lowey, H., **Quigg, Z.**, & **Bellis, M. A.** (2016). Relationships between adverse childhood experiences and adult mental well-being: results from an English national household survey. *BMC Public Health*, 16(1), 222. (Altmetric score, 25; Citations, 61)

R4: **Bellis, M. A.**, **Hughes, K.**, Hardcastle, K., Ashton, K., Ford, K., **Quigg, Z.**, & Davies, A. (2017). The impact of adverse childhood experiences on health service use across the life course using a retrospective cohort study. *Journal of Health Services Research & Policy*, 22(3), 168-177. (Altmetric score, 138; Citations, 48)

R5: **Bellis, M. A.**, Hardcastle, K., Ford, K., **Hughes, K.**, Ashton, K., **Quigg, Z.**, & Butler, N. (2017). Does continuous trusted adult support in childhood impart life-course resilience against adverse childhood experiences-a retrospective study on adult health-harming behaviours and mental well-being. *BMC Psychiatry*, 17(1), 110. (Altmetric score, 105; Citations, 53)

R6: **Hughes, K.**, **Bellis, M. A.**, Hardcastle, K. A., Sethi, D., Butchart, A., Mikton, C., **Jones, L.** & Dunne, M. P. (2017). The effect of multiple adverse childhood experiences on health: a systematic review and meta-analysis. *The Lancet Public Health*, 2(8), e356-e366. (Altmetric score, 542; Citations, 607)

All the research papers underwent peer-review before being published in high quality, international journals.

4. Details of the impact

The Blackburn with Darwen ACE study (R1) resulted in the local authority making a commitment to reduce ACEs and build resilience amongst those who have experienced ACEs (R6) (S1), and they raised awareness of ACEs and implemented ACE-informed practices by (S1; S2):

- Supporting social movements, including local/(inter)national ACE-awareness activities, e.g. publically accessible online ACE animation and e-learning courses for staff working in public and education services (S1).
- Working with Lancashire Care Foundation Trust to train staff to enquire about ACEs, and ensuring other public contracts commit services to ACE enquiry (e.g. sexual health; substance misuse); working with Lancashire Constabulary to bring ACEs into the Early Action Programme; and working with secondary schools to be ACE-informed (Embrace) (S2).

Changes have led to impacts for services and the public. For example, implementation of Embrace has led to: more school children self-referring for support and staff seeking advice and sharing best practice; personal support for staff (improving attendance and staff-student relationships); and via links with primary schools, raising awareness and early support for children. As a result of the ACE study and related interventions, Lancashire County are now committed to becoming the first UK trauma-informed county (S2).

Our ACE research has informed commissioning, decision-making and interventions across the UK, including in areas that have not implemented an ACE survey (demonstrating broader impacts) (R1-5; S3-5). In 2016/17, ACE enquiry was implemented across GP settings in West Lancashire (R1); evaluation suggests that the majority (70%) of patients felt their appointment was improved because the GP/nurse understood their childhood better (S3). In Nottinghamshire, the 2017-18 Director of Public Health Report recommended implementing whole-system approaches to resilience building (R5), multi-agency staff ACE training, and ACE enquiry (S4). In 2019/20, 750+ professionals from nine services were trained in ACE enquiry, significantly increasing their knowledge, and confidence to enquire and support service users (S5). Our evaluation of the programme (S5) shows that ACE enquiry is leading to positive outcomes, indicating ***“that both staff and service-users are committed and benefitting from the real-world attempts to put ACE science into practice”*** (Programme Implementer; S5). Service user feedback highlights impacts for them: ***“...as well as being a burden off my shoulders that I’ve carried around for all these years...opened up a doorway that I’ve been looking for a long, long time...why couldn’t anyone have told me about this (ACE enquiry) before”***.

Based on our research, we advise partners on preventing ACEs through:

- Evidence reports (e.g. World Health Organization [WHO], international).
- Programme evaluation (e.g. ACE enquiry; parenting programmes; Violence Reduction Units [VRUs]).
- Membership on multi-agency steering groups (e.g. WHO ACE state of the art steering group).
- Training sessions (e.g. three sessions for council staff [n~150] who work with children/adults affected by ACEs).

Across England, our studies have informed national documents (e.g. public health approaches to policing; College of Policing), evidence reviews (S6) and green papers (S7). In 2018, an ACE all-parliamentary group was set up to identify and promote policies for the prevention of ACEs. Their

final report (Chapter 2) used various sources of PHI ACE research and concludes that: **“research into ACEs has usefully raised awareness of the importance of early year’s experiences on child development”** and **“there is now a body of evidence that clearly demonstrates a correlation between adversity suffered during childhood and an increased prevalence of health and social problems in later life”** (point 17). Subsequently they recommend **“the Government should ensure that it is making the most of the opportunity for early intervention to effectively and cost-effectively address childhood adversity and trauma, and the long-term problems”** (point 25). Implementing ACE/trauma-informed approaches based on ACE research is embedded throughout the 2019 Serious Violence Strategy, with funding provided to Welsh police forces to **“test a new approach to policing, which prevents and mitigates ACEs”** (page 60/61), and to develop similar approaches across 18 VRUs in England and Wales.

Our first Welsh ACE survey (R4/5) has driven support for further research, and the production of Government policies and responses, and was used to inform the 2014-15 Chief Medical Officers Annual Report. In 2017, *Prosperity for All: the national strategy Taking Wales Forward* was published which sets out a number of government priorities, including: creating ACE-aware services, improving children/young people’s resilience (R5), and piloting Children First areas (S8). In 2017, the Government announced funding of £400,000 to help Cymru Well Wales to set up a hub to address ACEs, with additional funding to support future ACE surveys (R5; S9). As such, a wealth of ACE-focused prevention strategies have, and continue to be implemented in Wales, with early evaluation suggesting positive impact. For example, evaluation of ACE enquiry in health visiting services suggests that mothers believe it to be acceptable and important, and it improved the support they received, as the health visitor understood their childhood better (S10).

Our ACE systematic review/meta-analyses (R6) has informed national ACE-related enquiries in a number of countries (e.g. Australia, Government Inquiry into Mental Health and Addiction) and is being used by global experts to advocate for prevention strategies (e.g. WHO; Centre for Disease Control).

5. Sources to corroborate the impact

SOURCE 1 (S1)

Reference Blackburn with Darwen Borough Council’s approach to preventing and responding to adverse childhood experiences. [Childhood trauma | Blackburn with Darwen Borough Council](#)

SOURCE 2 (S2)

Lancashire Violence Reduction Network. Lancashire Serious Violence Strategy (section 3.4). [Lancs-VRN-Strategy.pdf](#)

SOURCE 3 (S3)

Reference to evaluation report of an intervention implemented (as a result of ACE studies): Hardcastle K and Bellis M.A. Routine enquiry for history of adverse childhood experiences (ACEs) in the adult patient population in a general practice setting: A pathfinder study. Public Health Wales, 2018. <https://www.drugsandalcohol.ie/29553/>

SOURCE 4 (S4)

Reference to county strategy document: Nottinghamshire County Council. *Director of Public Health’s Annual Report 2017-Investing in the Future: Making a Healthy Start*. Nottingham, Nottingham County Council, 2017. <https://www.nottinghamshire.gov.uk/media/129275/dph->

[annual-report-2017-final.pdf](#)

SOURCE 5 (S5)

Reference to evaluation report of an intervention implemented (as a result of ACE studies): Quigg Z et al. Evaluation of a system wide approach to implementing routine enquiry about adversity in childhood (REACH) across Nottinghamshire (Interim report). LJMU, 2020.

[07-2020-nottinghamshire-reach-evaluation--interim-report-june-2020.pdf \(ljmu.ac.uk\)](#)

SOURCE 6 (S6)

Reference to evidence based early year's intervention, Science and Technology Committee report.

<https://publications.parliament.uk/pa/cm201719/cmselect/cmsctech/506/50602.htm>

SOURCE 7 (S7)

Reference to green paper: Transforming Children and Young People's Mental Health Provision: a Green Paper.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/664855/Transforming_children_and_young_people_s_mental_health_provision.pdf

SOURCE 8 (S8)

Reference to national strategy document: Prosperity for All: the national strategy. Taking Wales Forward.

<https://gov.wales/sites/default/files/publications/2017-10/prosperity-for-all-the-national-strategy.pdf>

SOURCE 9 (S9)

Reference to hub to tackle adverse childhood experiences across Wales

[About Us — ACE Aware Wales](#)

SOURCE 10 (S10)

Reference to evaluation report of an intervention implemented (as a result of ACE studies): Hardcastle K and Bellis M.A. Asking about adverse childhood experiences (ACEs) in health visiting.

Findings from a pilot study. Public Health Wales, 2019.

<http://www.wales.nhs.uk/sitesplus/documents/888/Asking%20about%20ACEs%20in%20Health%20Visiting%20-%20Pilot%20Evaluation%20Report.pdf>