THE PROBLEM WITH 'ACEs'

EY10039: Edwards et al.'s submission to the House of Commons Science and Technology Select Committee Inquiry into the evidence-base for early years intervention. (12 December 2017)

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Introduction

This submission aims to encourage the Committee to consider that, as in any area of science and policy, evidence concerning the existence o,f and cure for, Adverse Childhood Experiences (ACEs) is unresolved and still contested. We are concerned that the remit of the Committee may be limited by a presumption that evidence for both ACEs and successful preventive intervention is already established, pre-empting the Inquiry's aim to *'examine the strength of the evidence linking adverse childhood experiences with long-term negative outcomes'*.

There are good reasons to be circumspect. The notion of Adverse Child Experiences is the latest in a long line of diagnoses of, and simple solutions to, complex social issues in the search for interventions that 'work'. The ACEs approach is not a neutral, evidence-based diagnosis. Rather, it reflects certain presumptions and is driven by particular agendas and interest groups (for example, what has been labelled the 'First Three Years Movement'). The ACEs approach, as with other attempts to diagnose and label sections of the population as deficient, has the potential for damaging consequences for the children and adults who are said to possess such deficiencies. Further, viewing social issues through the prism of ACEs may well inhibit our ability to identify and respond to human needs.

Embracing the promise of prevention sounds positive and common sense, but the scientific basis for early intervention programmes is open to question, with evidence of success quite

ambiguous and the negative consequences of prevention-thinking rarely acknowledged. It is also important to note that researchers who critique the current policy thinking do not do so from the same terrain as those who develop new policy initiatives and intervention programmes. They are often scholars with a depth of knowledge of previous social intervention projects (successful and unsuccessful), alert to questionable scientific-sounding claims and with a knowledge of the global origins of new policy agendas. The level of resources directed to providing the quick evidence for early intervention programmes is disproportionate to the funding available to those wishing to investigate and question the foundations of the early intervention paradigm. It is important that Committee members pay attention to informed critical voices where they do exist.

We write this submission as a group of social scientists with considerable knowledge of social policy interventions stretching back beyond the beginnings of the welfare state. Our group has all engaged in the study of early intervention and the use and abuse of scientific claims-making (the misuse of scientific language and metaphors to build the case for public funding). In the limited space available, we set out some questions concerning the scientific knowledge and evidence put forward by ACEs advocates and share some of the concerns we and others have arrived at following a number of years of research in the field. We would welcome the opportunity to present our questioning of the ACEs approach before the Committee.

A. Science, evidence and knowledge

It is important that assertions of social problems and solutions that claim to be based in 'the science' or to be 'evidence-based' are not taken simply at face-value. As social scientists, we are familiar with fundamental principles of scientific method, but we also consult with practising scientists in order to engage effectively with research and policy that purports to be scientific.

In our work, we have evaluated the methodological foundations involved in providing evidence for social problem diagnoses and for the success (or otherwise) of early intervention solutions. We have forged intellectual alliances with neuroscientists, psychologists, epidemiologists and medical researchers to become informed about the state of scientific knowledge in the fields which are most often drawn upon by early intervention programmes, notably, neuroscience and epigenetics. We consistently find that scientists themselves are far more modest in their

assessment of the current understanding of the mechanisms by which environments or experiences affect the biology of individuals, than are those who propose policy initiatives which purport to be based on such scientific discoveries. A useful distinction can be made between science and 'scientism', that is, a tendency for policy advocates to borrow the language and authority of science to legitimise their calls for particular forms of government action.

An inquiry which can distinguish between science and scientism needs to be alert to the following:

1. Skewed evidence

The evidence considered in ACEs advocacy is skewed through three main routes: assertions of biological risk, retrospective reporting and self-evaluation. A common criticism is that studies which claim to have identified 'the problem' tend to **extrapolate from research on clinical populations and highly controlled experiments in animal laboratories** to make claims about the wider human population. Primary researchers regularly criticise the assumptive base and accuracy of this translation and its claims to predictive validity. Further, ACEs studies rely on participants **recalling their childhood experiences**. This is a notoriously inaccurate way of establishing causation not least because such recollections are subjective and unverifiable. Individuals who do not see themselves as experiencing problems in adult life may not report conditions or relationships which may well have been negative but which they see themselves as having overcome. In contrast, individuals who are experiencing difficulties as adults may be more inclined to recall problematic aspects of their childhood experiences.

In proposing solutions, evaluation studies showing the effectiveness of specific intervention programmes are often **conducted by vested interests**: the programme originators and/or the services delivering the intervention, rather than by completely independent researchers.

2. Questionable results

The bringing together of diverse variables conceptualised as 'Adverse Childhood Experiences' may **obscure variations in cause and effect**. Unless appropriate statistical modelling is used, **random variation can be mistaken for real effects.** The problematic outcomes which ACEs are said to predict include mental health problems, educational under-achievement, unemployment, criminal behaviour, obesity, cancer, heart disease and diabetes. With such a

broad remit, **confounding factors** are very difficult to exclude. Further, the average effects of preventive programmes on development are quite modest, mostly not much larger than Cohen's criterion for a weak effect (d=.20). The result has been an escalating enterprise to improve the effect size using different methods, most recently exploring genetic and epigenetic targeting of interventions and the use of bio-markers in programme evaluation.

3. Statistical power and transferability

Attempts to duplicate findings from studies, including randomised controlled trials, often do not come up with the same results. This problem is known as the **replication crisis**, and is attributed to poor statistical practice and/or variations in social contexts (such as the availability of other supports locally and nationally). In terms of statistical practice, evaluation studies of interventions are often underpowered, with **small sample sizes that cannot support generalisation**, and no application of corrective statistical tests.

B. The social science critique

From our vantage point as social scientists, there are several ways in which the ACEs perspective might be subject to question.

1. The biologisation of social experiences

The ACEs approach claims that negative childhood experiences become embedded in the body of the individual, resulting in mental and physical difficulties in later life with attendant costs for society. Advocates assert, *'your body remembers what the mind forgets'*. ACEs advocates talk of a cumulative 'dose response' and of the 'toxic stress' induced by negative experiences as though these are matters of medical fact. They are not, they are **overly fatalistic metaphors**. This attempt to convert complex social experiences into biological, chemical effects excludes the power of the human mind to translate what may look like similar experiences in a variety of ways. Large cohorts of individuals who have experienced the most horrific things, such as concentration camps or military engagement, have been able to live a fulfilling existence once a more normal life is restored. ACEs turn the individual into an object who is **subjected to** experiences, not a human being who **interprets** them

2. Losing sight of normal and lack of precision

In order to make the case for funding, ACEs advocates often claim that almost half the population experiences at least one ACE. When we see that the list of ACEs includes parental separation and having mental illness as a feature of the household, this is hardly surprising. But this **risks pathologising a huge number of people and blurring the boundaries of normal and abnormal experiences**. The nine ACE variables are also very imprecise. They do not indicate the severity, timing or duration of reported physical, verbal and sexual abuse, or physical and emotional neglect. While we might agree that having a parent who is an alcoholic or having a mother who was subjected to domestic violence is far from ideal, how long these problems persist, their consequences for the wider family, the way they are managed or responded to by other family members is surely of profound significance. If a family member was diagnosed with a mental illness, it matters greatly which mental illness it was and the degree of parental incapacity it induced.

3. A narrow conception of social problems

The Inquiry's terms of reference describe ACEs as ranging *'from psychological, physical, or sexual abuse to wider experiences of household dysfunction',* but these factors are still very narrowly conceived - **they do not extend beyond the individual, their family or their household**. Looked at another way, currently in the UK, adverse situations faced by children and mothers could be said to include:

- Poverty - nearly one in three children growing up in poverty, with consequences for their education and health, nutrition, and housing (Child Poverty Action Group: http://www.cpag.org.uk/child-poverty-facts-and-figures).
- Hunger - just under half of the rising number of emergency food supplies distributed by food banks went to just under a quarter of a million children (Trussell Trust: https://www.trusselltrust.org/news-and-blog/latest-stats/mid-year-stats/).
- Inadequate housing - over a million and a half children living in housing that is overcrowded, temporary or run down (Shelter: http://england.shelter.org.uk/campaigns_/why_we_campaign/supporting_families_and_children), with homeless families with children often placed in insecure, unsuitable

temporary accommodation (House of Commons Briefing Paper: http://researchbriefings.parliament.uk/ResearchBriefing/Summary/SN02110).

Indeed, there is a body of evidence highlighting the social determinants of such harms. For example, there is a clear link between poverty and the incidence of child abuse and neglect, suggesting **increasing household income would be an effective strategy for reducing risk**. Yet, the ACEs solution to poverty lies not in economic and social improvements but in either preventive individual behaviour change or retrospective therapeutic intervention.

Parents and children who are experiencing difficulties are rarely asked what would help them. Instead they are monitored for 'markers of risk', measured, diagnosed and subjected to interventions. **This risks further demoralising already struggling sections of the population**. Such a view of people as bodies and brains to be managed and treated rather than citizens who should be represented and engaged, further excludes often marginalised people from democratic decision-making.

4. Simplistic 'new' solutions

Alarm bells should ring when policy advocates talk in evangelical terms of 'revolutions' in the scientific understanding of complex social problems and propose 'magic bullet' interventions which promise extensive financial savings 'down the line'. These are often social problems which have been occurring and been responded to by policy-makers and politicians for at least 150 years: crime, drunkenness, mental health problems, violence. This is not to say that nothing can or should be done but that **there is no such thing as a magic bullet intervention**.

5. Early years determinism

ACEs rely on a belief that 'the first years last forever'; that what happens in early childhood determines the adult an individual will become. This is by no means an established fact. There is much disagreement amongst experts in child development. Not only that, there are obvious risks in providing children (and adults) with a view of themselves as being entirely shaped by the experiences they have. **We do not yet know what impact it will have for adults to identify themselves by their ACE score or for children to be categorised in this way**. There is little reason to think that seeing oneself as determined by past experiences is at all helpful in finding a way out of current difficulties.

In conclusion

We would argue that the campaign encouraging teachers, health and social care professionals to be 'ACEs-aware' should be subject to serious questioning. While, of course, they should be looking out sympathetically and proactively for the children in their care, this is very different from performing amateur diagnoses of children as having high or low ACE scores. The further rolling out of the ACEs approach would be a very dangerous way to proceed. The mis-identification of individuals as being at-risk and then subject to intervention could have serious consequences for them and their families. On a broader scale, it can create the stigmatization of sections of the population whose social position or conditions of existence are identified as destined to create dysfunctional individuals.

We finish by posing a crucial question that deserves consideration, would a life lived in the miserable conditions created by adverse situations be wrong even if there were no long lasting biological effects?

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