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How child protection's 'investigative turn' impacts on poor and deprived communities.

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Abstract

Whilst referrals rose by 6% in England between 2009-10 and 2015-16, an 'investigative turn' has seen a 93% increase in section 47 child protection investigations. There are few findings of physical and sexual abuse which are relatively static whilst plans for neglect and emotional abuse have risen. However, the biggest change is the 143% increase in the number of investigations that do not result in a child protection plan. These often unnecessary investigations harm children and their families. The paper shows that state intervention particularly focus on children from the most deprived communities. In the 10% most deprived communities it is estimated that 45% of children born in 2009-10 were referred to children's social care before their fifth birthday. In an average class of 30 5 year-olds from these deprived communities, an estimated 14 children would have been referred, 9 be in need, 6 because of suspected abuse or neglect, and 2 children had a child protection plan. The legal threshold of significant harm was intended to ensure that intrusive interventions would be regulated. The current wide interpretation of 'risk' of significant harm has led to the investigative turn and an increasingly intrusive and out of control system.

How child protection's 'investigative turn' impacts on poor and deprived communities.

In recent years there have been major changes in responses to children in need with an 'investigative turn' because of widening suspicion of abuse and neglect. This turn is located within an increasingly harsh policy context where support services are being hollowed out at the same time as more families are experiencing poverty and its attendant pressures. This paper examines these changes in response to need and outlines the 'investigative turn' which it is argued results from a broadening of what is considered reasonable cause to suspect significant harm. It combines research data to show that deprived families experience significant levels of child protection investigations questioning the efficacy of this particularly when these families already suffer high levels of need and shame.

Background

The relationship between poverty, child abuse and neglect has historically been the subject of considerable scholarship. However, in recent decades, there has been less attention paid to understanding and researching this relationship. For example, the Department for Education collects no data on the socio-economic circumstances of families that are subject to child protection or care processes reinforcing the invisibility of the links. In recent years have seen a strong political message that there is no relationship between poverty and the likelihood of a child being harmed or neglected and even that it is irresponsible to suggest such a link. Furthermore, there has been little attention paid to the relationship between child abuse and neglect and levels of inequality within society, despite robust evidence on the relationship between inequalities and a host of social concerns such as addiction and mental health problems; problems that are highly pertinent to understanding and dealing with the harms that children experience.

Socio-economic circumstances can be both a direct and/or indirect contributory causal factor of child abuse and neglect¹. The direct effects occur when a parent is not able to

¹ Paul Bywaters, Lisa Bunting, Gavin Davidson, Jennifer Hanratty, Will Mason, Claire McCartan, Nicole Steils(2016) The relationship between poverty, child abuse and neglect: a rapid evidence review, York, JRF

adequately feed, shelter or clothe, their children or keep them warm. Thus, the changes in welfare as a result of austerity are of importance here. The indirect effects of poverty arise from the impact of low, insecure, intermittent income and the often accompanying issues in relation to housing and unemployment. Poverty has a very important psychological dimension. Across a host of countries, shame has been found to be central for those living in poverty. The social and psychological pain of the shame reported by people living in poverty is important for its own sake, but also because shaming discourses reduce self-confidence and a sense of self-efficacy.

Low income interacts with problems such as poor physical and mental health, disability in either parent or child and substance misuse (all problems that are increased in societies such as the UK with high levels of inequality). Whilst any of these factors may pose considerable challenges for families at adequate or higher levels of income, it is very unlikely that their children will be removed under child protection proceedings. However, if you are poor the chances of your child being removed are much higher as we explore further below.

The 'Investigative Turn'

Successive governments have collected data on children in need since 2009-10. The statistics show that there has been a small increase (6.4%) in the number of referrals made to local authorities between 2009-10 and 2015-16. However, there has been a 93% increase in the number of investigations under Section 47 of the Children Act in that same period. A much higher proportion of referrals are being responded to by investigations. In 2009-10 15% of referrals received such a response, but this increased to 28% by 2015-16. Does this reflect better detection of or growth in abuse and neglect? This is unlikely given that a growing number (143% increase from 45,000 to 108,980) and proportion of investigations (from 50% in 2009-10 to 63% in 2015-16) do not lead to child protection plans. The Judgement on AB & CD versus The London Borough of Haringey describes the serious harm caused to children and families by unwarranted section 47 investigations and research² shows that parents and children are very unlikely to accept or receive help following an

² Thorpe D.H., Denman G. and Regan S. (2011) *RIEP & ADCS Funded Safeguarding and Promoting Welfare Research Project*, Kendal, Practice Research Overbeck Ltd

investigation even if their situation is one of severe need. This increase in harm to children and families caused by the investigative turn is hard to justify unless overall harm to children is significantly reduced.

The number of new child protection plans within the year has increased by 19,010 to 63,310 between 2009-10 and 2015-16 due to an increase of 19,080 (60%) in plans because of neglect or emotional abuse with the latter frequently resulting from exposure to domestic violence. The 'investigative turn' is not about increases in or better detection of physical or sexual abuse. The number of plans for such abuses have increased numerically but by only 5.4% to 9,170 whilst investigations rose by 93% to 172,290 so only 5.3% of investigations find these forms of abuse.

Until recently information about the extent of a child's involvement in the safeguarding system in England was limited to the annual returns published by government. Bilson and Martin³ used a freedom of information request to gather data from 75% of all local authorities, covering over half a million children. Their study found that one in five (22.5%) of all the children born in 2009-10 were referred to children's social care before they reached their fifth birthday. The Department for Education has now confirmed this finding⁴ of one in five referred (19%) for all local authorities. Most of the children in Bilson and Martin's study were assessed by the local authority and 14.3% were found to be in need. A child in need is defined in the Children Act as requiring a service because the child is unlikely to achieve or maintain a reasonable level of health or development, or whose health and development is likely to be significantly or further impaired, if services were not provided, or the child is disabled. For over 11% of all children the category of need given at the initial assessment was either abuse or neglect, or dysfunctional family, the latter being defined as a family where there are concerns about abuse and neglect with insufficient evidence to warrant an investigation. Formal investigations under section 47 of the Children Act were undertaken in respect of 5.4% of all children and a child protection plan was put in place for 3.5% of all children. This study thus shows that: one in every five children was referred to

³ Bilson, A., & Martin, K. E. (2016). Referrals and Child Protection in England: One in Five Children Referred to Children's Services and One in Nineteen Investigated before the Age of Five. *British Journal of Social Work*, bcw054.

⁴ DfE personal communication

social care before the age of five; one in every nine was suspected of being abused; and one in every 19 was formally investigated.

Child protection and deprived communities

The connection between poverty, deprivation and involvement in the child protection system has been well established over many years. Bywaters and colleagues⁵ have shown that there is a gradient across the levels of deprivation in England with increasing involvement in the system, the higher the level of deprivation in the community. Children in the 10% most deprived communities were around 11 times more likely to be on a child protection plan or in care than children in the least deprived 10%. Indeed, 60% of all children on child protection plans or in care lived in the 20% most deprived communities.

There is no research on how many children in deprived communities are involved in the child protection system over time. The estimate here uses the findings of Bywaters et al. combined with the data from the study by Bilson and Martin. In doing the calculations we have taken into account the differences in rate per thousand children in deprived communities in the two studies. The estimate makes a number of assumptions which include that: the gradient of deprivation found in Bywaters et al.'s study is similar to that found across the authorities in Bilson and Martin's study; the length of time spent on child protection plans and children in care is not dependent on the level of deprivation in the community; and that the ratio of referrals, child protection plans and children in care is similar across different levels of deprivation. It is likely that these assumptions will not prove to be correct and that there will also be large differences between local authorities. However, until further research is available, this simple model gives the best available indication of the likely levels of involvement of children in communities with different levels of deprivation.

⁵ Bywaters, P., Brady, G., Sparks, T., & Bos, E. (2014). Inequalities in child welfare intervention rates: The intersection of deprivation and identity. *Child & Family Social Work*.

Diagram 1: Estimates of the proportion of children born between April 1st 2009 and 31st March 2010 who had reached various stages of children's services involvement before their 5th birthday.

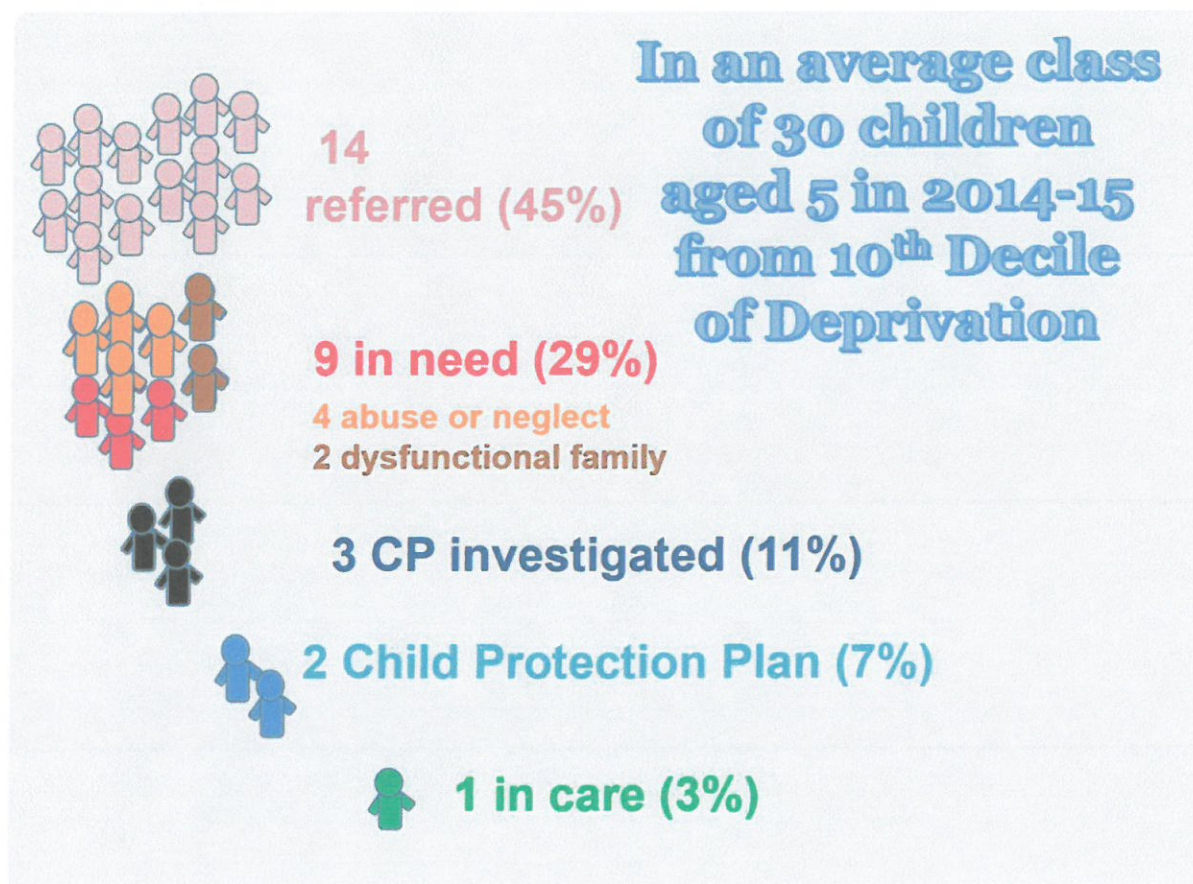


Diagram 1 shows the estimates of the proportions of children in the most deprived 10% of communities who would be referred etcetera in an 'average class' of thirty 5-year-olds born in 2009-10. This estimate shows that in this 'average class' fourteen children would have already been referred to children's social care and as many as six of the children will have been suspected of abuse or neglect, or have come from a "dysfunctional family". Three children in the class would have been investigated under section 47 for suspected abuse; two placed on a child protection plan; and one child in care. It can only be guessed what the picture would be like if we had data to look at children in the 2% most deprived communities. At the other end of the scale children in the least deprived 10%, a similar class might include only one child who had been referred to children's social care or been in need.

Implications

This estimate suggests that a large proportion of children in the most deprived communities will be involved with children's social care and that many children will have been suspected of being neglected or abused before the age of five. Since over half of all referrals and investigations concern children over this age the numbers drawn into the system before the age of 18 will be much higher. This level of investigation in deprived communities is of concern for many reasons. As we have already noted parents living in poverty have limited resources to care effectively for their children and are likely to be struggling with feelings of shame and lack of self-worth. Asking for help in a climate of suspicion is highly risky. Moreover, fear of exposing your family to the suspicious gaze of 'the authorities' may foster behaviour that is interpreted by professionals as suspicious (such as delays in seeking medical help when a child is injured).

The current policy of Early Help which aims to prevent harm needs to be explored within an understanding of the widening definitions of 'risk' of significant harm that underpin the 'investigative turn'. It is possible that it is contributing to the widening of the child protection net as agencies increasingly frame children in need of help as families needing to be investigated. Furthermore, non-stigmatising sources of support for families, delivered through Children's Centres, have been substantially reduced because of austerity.

The concept of significant harm in the Children Act 1989 was intended to regulate state intervention and protect families from excessive intervention. However, the current interpretation of 'risk' of significant harm within an 'investigative turn' would appear to be leading to a system that is increasingly intrusive and out of control.

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**Economic deprivation, maternal
depression, parenting and children's
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Economic deprivation, maternal depression, parenting and children's cognitive and emotional development in early childhood¹

Kathleen E. Kiernan and M. Carmen Huerta

Abstract

This study uses data from the UK Millennium Cohort Study to examine the extent to which economic circumstances in infancy and mother's mental well-being are associated with children's cognitive development and behaviour problems at age 3 years, and what part parenting behaviours and attitudes play in mediating these factors. The analyses derived from Structural Equation Modelling show that economic deprivation and maternal depression separately and collectively diminish the cognitive and emotional well-being of children, and part of this diminution emanates from less nurturing and engaged parenting by those with less economic and emotional resources.

Keywords: Poverty; maternal depression; parenting; cognitive development; behaviour problems; Structural Equation Modelling

Introduction

Several decades of social science research has shown that children growing up in deprived circumstances do not fare well and that where one starts from in life is a key, but not exclusive, determinant of life chances (Atkinson, Maynard and Trinder 1983; Duncan and Brooks-Gunn 1997; Heckman 2006). Moreover, there is ample evidence that children's cognitive and emotional competencies are affected by living in impoverished socio-economic environments (Shonkoff and Phillips 2000; NICHD 2005) and differences are already observable early in a child's life. For example, longitudinal studies in the UK and Australia have shown that differences in cognitive scores amongst children living in poverty are already to be seen in early childhood, even before

With these provisos in mind our analysis provided a number of insights and findings. With respect to cognitive development we found that the influence of economic disadvantage on a child's intellectual development was substantially mediated by the intervening mechanisms measured by the parenting factors. The direct path from economic deprivation to cognitive development in our model was somewhat weaker than the indirect pathway. This suggests that a greater focus on the intervening mechanisms that affect a child's intellectual development and potential educational achievement may be as important as the provision of say income benefits. Moreover, our various model specifications indicate that cognitively enhancing activities, such as reading to the child, may be particularly influential in mediating the effect of poor economic circumstances on intellectual development, with impoverishment associated with a fairly large negative effect on cognitive stimulating activities, and these types of activities in turn are associated with a fairly large positive effect on intellectual development. These findings are in line with the family investment perspective. Additionally, we found that economic disadvantage has a negative effect on the warmth of the relations between the mother and child, which in turn is important for a child's intellectual development. In contrast with economic circumstances the association between maternal depression and children's cognitive development was much weaker.

However, maternal depression was strongly associated with mother's reports of children's behaviour problems. Within the specification of our model the direct pathways from maternal depression to externalizing problems were almost as strong as the indirect ones, and for internalizing problems much of the effect was direct rather than through parenting practices. Further research is required to identify other mediators and/or processes that may underpin the direct estimates remaining in our model. Other potential mediators might include the extent of social and community support for depressed mothers or the extent of family or spousal conflict. Nevertheless, there were significant indirect pathways through parenting practices, with maternal depression being associated with a reduction in the mother's ability to engage positively with her child, which in turn was associated with the increased likelihood that the child exhibited conduct and emotional problems. Maternal depression was most noticeably associated with the use of harsh disciplinary practices (more frequent smacking and shouting) which in turn were very strongly related to conduct problems amongst the children. Furthermore, a substantial part of the effect of economic deprivation on child behaviour problems was mediated through the mother's depression: findings consistent with a family stress perspective. In lone-mother families the importance of maternal depression for children's well-being was somewhat more marked than was the case where both parents were living together.

In sum, at age three there are already visible and notable disparities in children's cognitive development and behavioural adjustment. Our analysis has shown that economic deprivation matters more for a child's cognitive development and mother's mental state for children's behavioural adjustment; but economic deprivation also engenders poorer maternal well-being, which in turn leads to a reduction in children's positive behaviours. Furthermore, this study has highlighted the importance of parental behaviours characterized by parental attitudes and discipline for children's externalizing behaviour and emotional well-being, and parental involvement characterized by active participation in activities such as reading that promote cognitive development. Our findings only relate to a narrow window in early childhood but what happens in these early years, without appropriate interventions, is likely to have far reaching legacies.

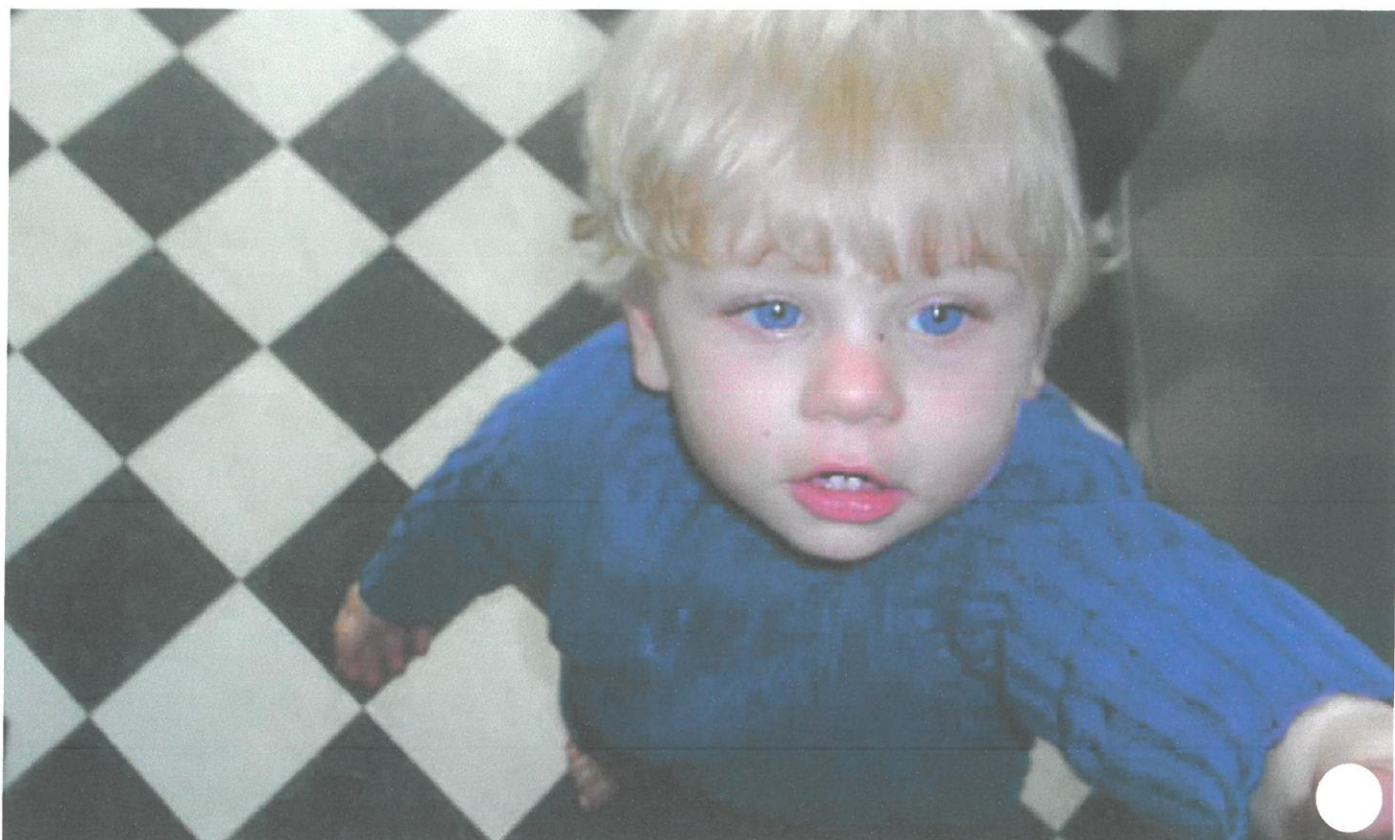
(Date accepted: June 2008)

Appendix

Table AI: Distribution of outcome measures and focal variables

	Per cent		Per cent
Children's outcomes at age 3			
Cognitive scores		Behavioural adjustment	
<i>Bracken Basic Concept Scales</i>		<i>Conduct problems</i>	
Very delayed	1.3	Mean value (range 0–10)	2.6
Delayed	9.3	Scores >=4 (%)	29.6
Average	61.1	<i>Hyperactivity/ Inattention</i>	
Advanced	23.0	Mean value (range 0–10)	3.9
Very advanced	5.3	Scores >=7 (%)	12.9
		<i>Emotional problems</i>	
		Mean value (range 0–10)	1.3
		Scores >=5 (%)	2.7
Focal variables			
Economic deprivation at 9 months		Mother's depression at 9 months	
<i>Income-poverty (< 60% of median)</i>		<i>Low or sad for 2 wks since birth of child</i>	
Not poor	76.9	No	68.0
Poor	23.1	Yes	32.0
<i>Financial difficulties</i>		<i>Doctor diagnosed depression</i>	
Living comfortably	28.2	No	75.8
Doing alright	37.4	Yes	24.2
Just about getting by	25.2	<i>Malaise score</i>	
Finding it quite difficult	6.9	0: less than 4	84.7
Finding it very difficult	2.2	1: at least 4	15.3
<i>Housing tenure</i>			
Owner/Being bought/ Private	86.3		
Renting			
Local Authority	13.7		

Notes: Figures take into account sampling weights.



This article is more than **3 years** old

Rise in referrals to social services causing trauma to families, expert says

Policy requiring risk assessment at low threshold means some parents feel fear rather than reassurance, researcher argues

Louise Tickle

Fri 15 Apr 2016 17.07 BST

A huge increase in the number of children being referred to social services has caused “catastrophic” trauma for tens of thousands of families without any corresponding increase in the number of child abuse cases detected, the author of a study has said.

According to statistical analysis by the University of the West of England, child protection referrals have risen by 297% since the Children Act came into force 23 years ago, and assessments by social services have risen by 359%. The proportion of cases in which abuse was identified has plummeted from 24% to just under 8%.

“We are now at a situation where up to 5% of all families are now referred for assessment every year,” said Dr Lauren Devine, principal investigator of the Economic and Social Research Council-funded study. “The vast majority of those do not injure

or seriously harm their children, but government policy requiring risk assessment at quite a low threshold means that rather than feeling supported by social services, some families now feel fear.”

As the number of applications to take children into care hits a record high, Devine argues that the system is overwhelming caseworkers and putting the most serious cases of abuse at risk of being missed. At the same time, many families who have done nothing wrong are being traumatised by intrusive investigations. “Research shows that if you put parents on the floor with stress, you’re not going to improve their parenting,” she said.

There is no way to separate out a simple request for services for a struggling family from an assessment of whether a child is at risk of abuse, Devine said. “These now go hand in hand - and you’re then investigated and risk-assessed on all aspects of your family life.” Social workers say their caseload now exceeds what children’s services can reasonably manage.

The question of the best way to protect children has come into particular focus since the death of Peter Connelly, known as Baby P, in 2007. But Devine’s findings challenge more than two decades of government policy and social work practice on how to prevent children from being abused and sometimes killed.

Under the current system, social workers assessing a family are required to gather forensic evidence that may be presented in court. But that process comes with no accompanying criminal justice framework of statutory rights to protect individuals suspected of abuse. At the same time, social workers are supposed to point families towards services that are often impossible to access as local authority funding continues to be slashed.

Not everyone agrees that the rise in referrals is evidence of a problem. According to the Association of Directors of Children’s Services (ADCS), the increase may well demonstrate more awareness of the harm caused by child abuse, and a greater willingness by professionals to share concerns earlier than they did in the 1990s, rather than waiting for a crisis to hit. “That would be a really good thing,” said the ADCS president, Dave Hill. “We don’t want to only be intervening when families are really in trouble.”

However, Devine argues that a result is that parents increasingly feel suspicion and distrust when they hear a social worker knocking on the door, rather than any reassurance that they will be helped. And she adds: “They are right to be concerned at the dual nature of social services’ intervention in family life. The Children Act 1989 made a clear separation between consensual and non-consensual intervention. Over the past two decades, that has been eroded.”

Devine suggests that separating the state’s welfare role and investigatory and policing function could lead to clearer, faster identification of child abuse. In a forthcoming book, *The Limits of State Power and Private Rights*, Devine suggests that although some more confident parents are able to cope with the experience of an unwanted child protection referral, for others the experience can be “catastrophic” and leave

them utterly devastated.

“These parents do not recover,” she said. “They remain terrified of any official contact, and become unable to answer the door or telephone. They do everything in their power to protect their children from the state. They cut off social contact and leave jobs and homes to remove themselves from the stigma. Their confidence and sense of identity is damaged.

“The most extreme I have come across is where parents kill or attempt to kill their children and themselves following notification of social work contact as they are so terrified they see this as the lesser of two evils.”

The NSPCC’s head of helplines, John Cameron, said the UK’s child protection system was sophisticated and successful at identifying children at risk, but he acknowledged this came at a cost. “Ideally we’d want appropriate investment in support for families who need it after unfounded [allegations of] abuse, to get their lives back on track, but the real world is that local authorities have limited resources,” he said.



Adele Joicey with her son Ryan. Photograph: Christopher Thomond for the Guardian

Case study: ‘I felt completely disempowered’

When mother-of-four Adele Joicey took her two-year-old twin son Ryan to the GP in December with a worryingly high temperature, she had no idea that within hours social services would be investigating her for possible child abuse. “When the doctor took Ryan’s top off there was a graze on his chest,” she said. Joicey hadn’t seen it before – Ryan had been looked after by his carer that day while she went to work as an NHS communications manager – and she didn’t know how he’d got it.

Told that she was not allowed to leave the surgery, Joicey watched Ryan become progressively more unwell in the two hours it took for the family’s social worker to arrive (Ryan is disabled, and one of his sisters has Down’s syndrome, so the family gets social services support). At that stage she didn’t know that the “unexplained injury” referral that her GP was making to children’s services had been noted down by her social worker as “non-accidental” – and the fact that the doctor’s words were heard so wrongly now worries her greatly.

“Non-accidental has a very different meaning from unexplained, especially when you’re looking to remove a child from its parents,” Joicey said. “If the surgery hadn’t

kept the audio recording of those calls [which the Guardian has heard], I'd have nothing to challenge them with."

The children's services investigation was based on Ryan having a non-accidental injury, and at one point Joicey was told to pack a bag for her son and face the possibility of him being removed from her care that night. Even though it took social workers just one day to accept that Ryan, who is partially mobile, had caused a friction burn to his own chest while twisting on a carpeted stair, the investigation, the implied accusation and the threat of losing her son has resulted in trauma that will be hard to overcome.

Joicey has since received an apology from a paediatric consultant who examined Ryan in hospital for the distress caused, but the council will not say sorry for what Joicey feels was an unnecessarily heavy-handed approach. As a result of the way those few painful hours were handled, her relationship with the family's social worker has been destroyed.

"There has never been a single question over my parenting before," she said. "Bringing up two children who have disabilities is hard enough without the people who are meant to support you turning against you. I am a strong person, but this absolutely tested me. I felt completely disempowered. Someone came into my home and took my power away where I should be safe. How would the twins have coped if they'd been separated? And Ryan was so poorly. It was the helplessness of it all."

Dissatisfied with North Tyneside council's response to her initial complaint, Joicey has escalated her concerns. "I'm completely innocent, but our social worker's last words were: 'We're not going to call the police on this.' Do you know how threatening that sounds?"

Joicey knows that the family will need social services support in the future, but this now causes her more anxiety. "I don't trust social workers any more, and I don't trust doctors either," she said. "The only thing that this has taught me is to think twice before seeking medical attention for my child."

Topics

- Child protection
- Children
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Department
for Education

Research Report DFE-RR254

Family stressors and children's outcomes

Elizabeth Jones, Leslie Gutman
& Lucinda Platt

Childhood Wellbeing Research
Centre

was often the result of parental separation and divorce when one parent moved to another location, sometimes taking a sibling or two with them. For another 35 per cent of the children, this event co-occurred when a parent or sibling was in hospital for a long period of time and the separation was seen as causing stress for the child.

Parental bereavement was the next most common event, with 95 children experiencing this tragedy. Some deaths of parents were sudden, unexpected events; others followed a long illness.

Parents fighting and arguing more than usual was the next most common stressful event, which co-occurred with parental separation or divorce in about 30 per cent of cases.

This was followed by the death of beloved pets. It is worth noting that most parents who listed pet bereavement as a stressful event did not list other stressful events at the same data collection point, which may put the death of a hamster in perspective.

Changing schools was also listed as a stressful event, which sometimes coincided with moving to a new home. Although moving home *per se* was not necessarily noted as stressful, it was often the changes which accompanied moving that were difficult, such as adjustment to a new school and friends.

There were also a few occurrences of atypical but highly stressful events including homelessness, living in a refuge or being placed in foster care, and a family member being arrested or put in prison. Parents also occasionally reported having a new sibling, problems in school and with friends, a friend being ill or injured and difficulties with finances as stressful events.

It is important to keep in mind that frequencies of each event are likely to be underestimated. Stressful events may have occurred which were not mentioned by the parents, either because the parents did not view the events as particularly stressful, the parent did not wish to mention the events, or the parent did not know that they occurred.

Table 4.1: Numbers of ALSPAC children experiencing stressful events by age period

Stressful Event	Timing of experience of stressful event		
	Birth to 7 years	Age 7 to 10 years	Age 10 to 13 years
1. Death of parent	27	31	37
2. Death of family member/friend	171	234	182
3. Child was seriously ill or injured	135	130	88
4. Family member was seriously ill or injured	114	154	138
5. Friend was ill or injured	2	3	3
6. Saw crime or accident	125	170	93
7. Negative change in parent's financial situation	3	3	1
8. Domestic violence/abuse including alcohol and drugs	51	44	29
9. Victim of abuse, violence or bullying (not within immediate family)	32	44	72
10. Parents separated /divorced/ left	140	191	140
11. Moved/attended new school	16	20	15
12. Got a new (step) brother or sister	7	3	2
13. Pet died	15	35	16
14. Parents/family argued more than previously	11	24	30
15. Family member arrested	6	5	15
16. Homeless/Living in refuge/Foster care	15	5	3
17. Not seeing parent/siblings as much as usual	40	35	28
18. Problems in school or with friends	3	3	6
No stressful events	7136	6248	5654

4.1.4 Outcome measures

Both educational and wellbeing outcome measures are covered in the analysis. National exam scores which come from the National Pupil Database were used as a measure of educational attainment. Total point scores were gathered at 14 years (KS 3). They were finely graded to maximise analytical purchase. For KS 4 (age 16), total GCSE/GNVQ new style scores were used.

Information on wellbeing was gathered from parents' questionnaires when their children were 7, 10 and 13 years old. This report used wellbeing measured at 13 years as outcomes. Four dimensions of wellbeing were examined: emotional, behavioural, social and subjective school wellbeing. All were measured on a three-point scale, where parents were asked to report their wellbeing relative to children of the same age: 0 = No more than others, 1 = A little more than others and 2 = A lot more than others. Dimensions of wellbeing were coded so that higher scores indicate more positive wellbeing.

Emotional wellbeing includes questions about the teenagers' separation anxiety, fears, compulsions and obsessions, anxiety and moods.

Behavioural wellbeing includes questions about teenagers' attention, awkward and troublesome behaviours, such as not listening, not following rules and telling lies.

Social wellbeing includes questions about their teenagers' friendships and social interactions and awareness, such as having at least one good friend, liked by other children and awareness of other people's feelings.

School wellbeing includes questions about their teenagers' satisfaction and engagement in school, such as whether they enjoyed school and found it stimulating.

4.1.5 Control variables

A small set of controls were in the second stage of analysis which included special educational needs status and eligibility for free school meals, gathered from Pupil Level Annual School Census (PLASC) data.

4.2 Analysis

The analysis took place in two stages.

1. Simple analyses examine the association between each stressful event for each of the three different time intervals (i.e., birth to age 7, age 7 to 10 and age 10 to 13) at which the event occurred with each of the six teenage outcomes.
2. More complex analyses examine the association between each stressful event and each outcome at the three different time intervals, controlling for the previous outcome measure and two control variables: special educational needs status and

eligibility for free school meals. For previous educational attainment, scores in national tests taken at age 11 (KS 2) were used to examine whether family stressful events were associated with changes in attainment between ages 11 (KS2) and 14 (KS3). Similarly finely graded scores from tests taken at age 14 (KS3) were used to examine whether family stressful events were associated with changes in attainment between the ages of 14 (KS3) and 16 (KS4). For wellbeing outcomes, the same wellbeing scores measured at 10 were used to determine whether family stressful events were associated with changes in wellbeing between the ages of 10 and 13.

It is important to note that the analysis measures associations rather than specific causality. That is, we can identify whether children who experienced a stressful event had poorer outcomes than those who did not but we cannot definitively attribute the difference to the stressful event itself.

4.3 Results

4.3.1 Relationship between stressful events and national test scores

Table 4.2 Stressful events and KS3 outcomes

Significant Stressful Events	Birth to 7 years		Age 7 to 10 years		Age 10 to 13 years	
	Without controls	With controls	Without controls	With controls	Without controls	With controls
Domestic violence/abuse	Yes	No	Yes	No	No	No
Victim of abuse, violence or bullying	No	No	Yes	Yes	Yes	No
Parents separated /divorced/ left	No	No	No	No	No	No
Moved/attended new school	No	No	Yes	Yes	No	No
Parents/family argued more than previously	No	No	No	No	Yes	No
Homeless/Living in refuge/Foster care	Yes	No	No	No	No	No

Note: Yes = statistically significant at the .10 level or below; No = not significant.

Stressful events which had statistically significant associations with later exam scores taken at age 14 are shown in the above table. Stressful events which were not significantly associated with KS3 outcomes are not listed.

Table 4.3: Stressful events and KS4 outcomes

Significant Stressful Events	Birth to 7 years		Age 7 to 10 years		Age 10 to 13 years	
	Without controls	With controls	Without controls	With controls	Without controls	With controls
Domestic violence/abuse	Yes	No	Yes	Yes	No	No
Victim of abuse, violence or bullying	Yes	No	Yes	No	Yes	No
Parents separated /divorced/ left	No	No	Yes	No	No	No
Moved/attended new school	No	No	Yes	No	No	No
Parents/family argued more than previously	No	No	No	No	Yes	No
Family member arrested	Yes	Yes	No	No	No	No

Note. Yes = statistically significant at the .10 level or below; No = not significant.

Stressful events which had statistically significant associations with later exam scores taken at age 16 are shown in the above table. Stressful events which were not significantly associated with KS4 outcomes are not listed.

Domestic abuse and victimisation outside the home were significantly associated with lower attainment in adolescence. Teenagers who experienced domestic abuse when they were 10 years old and younger had significantly lower scores at ages 14 and 16. Teenagers who experienced victimisation or abuse outside the home at any age, had significantly lower exam scores at ages 14 and/or 16 than their peers who did not experience abuse. Teenagers who experienced domestic abuse and victimisation/abuse outside the home between the ages of 7 and 10 had lower scores at ages 14 and 16, even when previous test scores were taken into account, indicating that they had made less progress than their peers who did not experience abuse.

Parental divorce between the ages of 7 and 10 was associated with lower exam scores at age 16, but this finding was not significant once previous achievement was considered. Teenagers who experienced a stressful move to a new home and school between ages 7 and 10 had lower test/exam scores at ages 14 and 16. At age 14, this relationship remained significant even when taking into account test scores at age 11. Therefore, adolescents who moved in primary school made less academic progress than their peers who did not move. Teenagers whose parents argued more after age 10 had lower scores at ages 14 and 16, but the effect did not persist once previous attainment was taken into account.

Teenagers who experienced homelessness or were placed in care before age 7 had lower scores at age 14, but such associations probably already had an impact on age 11 scores which meant that there was no effect once age 11 attainment was taken into account. Teenagers who had experienced the arrest of a family member before age 7 also had lower scores at age 16, even when previous attainment was taken into account.

4.3.2 Relationship between stressful events and emotional wellbeing at age 13

Table 4.4: Stressful events and emotional well being age 13

Significant Stressful Events	Birth to 7 years		Age 7 to 10 years		Age 10 to 13 years	
	Without controls	With controls	Without controls	With controls	Without controls	With controls
Death of parent	No	No	No	No	Yes	Yes
Death of family member	Yes	Yes	Yes	Yes	Yes	No
Child was ill or injured	No	No	Yes	No	No	No
Family member was ill or injured	Yes	No	Yes	No	Yes	No
Saw crime or accident	No	No	Yes	No	Yes	No
Domestic violence/abuse	Yes	No	Yes	No	Yes	Yes
Victim of abuse, violence or bullying	No	No	Yes	No	Yes	No
Parents separated /divorced/ left	No	No	Yes	Yes	Yes	Yes
Parents/family argued more than previously	No	No	No	No	Yes	Yes
Not seeing parent/siblings as much as usual	No	No	No	No	Yes	No
Moved/attended new school	No	No	No	No	Yes	Yes
Family member arrested	Yes	No	Yes	No	Yes	Yes
Homeless/Living in refuge/Foster care	No	Yes	No	No	Yes	No

Note: Yes = statistically significant at the .10 level or below; No = not significant.

Stressful events which had statistically significant associations with emotional wellbeing measured at age 13 are shown in the above Table 4.4. Stressful events which were not significantly associated with emotional wellbeing are not listed.

Teenagers who experienced bereavement at any age had lower emotional wellbeing at age 13 compared to those who did not lose a family member. This finding remained significant even taking into account emotional wellbeing measured at age 10. This indicates that experiencing the death of a parent or family member in childhood may have continuous, worsening effects on a teenager's emotional wellbeing, long after the event has occurred. While family bereavement was associated with lower emotional wellbeing at any age, interestingly, parental bereavement was only significant when it occurred from 10 years onwards.

The experience of serious illness, either of the child or parent, and involvement in a crime or accident also had a significant association with lower emotional wellbeing at age 13. On the other hand, illness, injury, or accidents were not related to lower emotional wellbeing once the controls were taken into account. This indicates that although these events have long-term negative associations with adolescents' emotional wellbeing, they do not contribute to worsening emotional wellbeing across time.

Abuse, both inside and outside the home, had significant negative associations with emotional wellbeing at age 13, no matter when it occurred. Teenagers who experienced domestic abuse after age 10 also showed negative changes in their emotional wellbeing. Parental separation/divorce at age 7 and onwards had negative associations with emotional wellbeing at age 13, even controlling for emotional wellbeing at age 10. This suggests that parental separation or divorce was associated with worsening wellbeing as children entered adolescence.

Adolescents who experienced parental conflict at age 10 and onwards had lower emotional wellbeing at age 13, even controlling for emotional wellbeing at age 10. This suggests that parental conflict may be associated with negative changes in emotional wellbeing for teenagers.

Not seeing parents or siblings as much as usual from age 10 was associated with lower emotional wellbeing at age 13.

Attending a new school and moving at age 10 or older was associated with lower emotional wellbeing at age 13, taking into account emotional wellbeing at 10 years. This indicates that adolescents who had a stressful move to a new home and school during this period experienced negative changes in emotional wellbeing at age 13.

Teenagers who experienced the arrest of a family member, at any age, had lower emotional wellbeing at 13 years. Those who experienced this after age 10 showed negative changes in their emotional wellbeing at age 13.

Young people who experienced homelessness or had been placed in foster care early in life (before age 7) had continuing, worsening emotional wellbeing from ages 10 to 13.

Teenagers who were homeless or placed in care after age 10 had lower emotional wellbeing than their peers.

4.3.3 Relationship between stressful events and behavioural wellbeing at age 13

Table 4.5: Stressful events and behavioural wellbeing at age 13

Significant Stressful Events	Birth to 7 years		Age 7 to 10 years		Age 10 to 13 years	
	Without controls	With controls	Without controls	With controls	Without controls	With controls
Death of parent	No	No	No	No	Yes	Yes
Death of family member	No	No	Yes	No	Yes	Yes
Child was ill or injured	No	No	No	No	Yes	No
Family member was ill or injured	Yes	No	Yes	No	Yes	No
Saw crime or accident	No	No	Yes	No	Yes	No
Domestic violence/abuse	Yes	No	Yes	No	Yes	Yes
Victim of abuse, violence or bullying	Yes	No	Yes	Yes	Yes	Yes
Parents separated /divorced/ left	No	No	Yes	Yes	Yes	Yes
Not seeing parent/siblings as much as usual	No	No	No	No	Yes	Yes
Parents/family argued more than previously	No	No	Yes	No	Yes	Yes
Moved/attended new school	No	No	Yes	No	Yes	Yes
Family member arrested	No	No	Yes	No	Yes	Yes
Homeless/Living in refuge/Foster care	Yes	Yes	Yes	No	Yes	Yes

Note: Yes = statistically significant at the .10 level or below; No = not significant.

Stressful events which had statistically significant associations with later behavioural wellbeing measured at age 13 are shown in the above table. Stressful events which were not significant are not listed.

Teenagers who experienced bereavement from age 7 onwards had lower behavioural wellbeing at age 13 compared to those who did not suffer such a tragedy. Teenagers who experienced the death of a parent or family member after the age of 10 had negative changes in their behavioural wellbeing at age 13.

Childhood illness after the age of 10 was associated with lower behavioural wellbeing at age 13. Teenagers who experienced a serious illness in the family had lower behavioural wellbeing, no matter what age it occurred. Teenagers who saw a crime or accident from age 7 onwards had lower behavioural wellbeing at 13 compared to their peers who did not. However, neither illness nor seeing a crime/accident was associated with negative changes in behavioural wellbeing across time.

Abuse, both inside and outside the home, had a significant negative association with behavioural wellbeing at age 13, no matter when it occurred. Teenagers who experienced domestic abuse after age 10 also showed negative changes in their behavioural wellbeing, taking into account previous wellbeing. Teenagers who suffered victimisation or abuse outside the home after age 7 showed worsening behavioural wellbeing at age 13.

Parental separation/divorce at age 7 and onwards had negative associations with behavioural wellbeing at age 13, even controlling for wellbeing at age 10. This indicates that parental separation and divorce was related to worsening behavioural wellbeing as children approach adolescence.

Teenagers who witnessed parents arguing more than usual after the age of 7 onwards had lower behavioural wellbeing. Furthermore, teenagers who experienced parental conflict at age 10 and onwards had worse behavioural wellbeing at age 13, even controlling for wellbeing at age 10. This suggests that parental conflict may be associated with negative changes in emotional wellbeing for teenagers.

Not seeing parents or siblings as much as usual from age 10 was associated with negative changes in behavioural wellbeing at age 13.

Teenagers who moved home and joined a new school at age 7 or older had lower behavioural wellbeing at age 13 than their peers who did not move. Also, moving and attending a new school at age 10 or older was associated with negative changes in behavioural wellbeing at age 13.

Teenagers who experienced the arrest of a family member from age 7 onwards had lower behavioural wellbeing at 13 years. Teenagers who had this experience after age 10 showed negative changes in their behavioural wellbeing at age 13.

Those experiencing homelessness or foster care at any age had lower behavioural wellbeing than their peers. When this occurred before age 7, children had continuing, worsening

behavioural wellbeing from ages 10 to 13. Teenagers who were homeless or placed in care after age 10 also experienced negative changes in their behavioural wellbeing at age 13.

4.3.4 Relationship between stressful events and social wellbeing at age 13

Table 4.6: Stressful events and social wellbeing at age 13

Stressful Event	Birth to 7 years		Age 7 to 10 years		Age 10 to 13 years	
	Without controls	With controls	Without controls	With controls	Without controls	With controls
Death of family member	Yes	Yes	Yes	No	No	No
Child was ill or injured	Yes	No	No	No	No	No
Family member was ill or injured	Yes	No	Yes	No	No	No
Saw crime or accident	No	No	Yes	No	No	No
Domestic violence/abuse	Yes	No	Yes	No	Yes	Yes
Victim of abuse, violence or bullying	No	No	Yes	No	Yes	Yes
Parents separated /divorced/ left	No	No	Yes	Yes	Yes	Yes
Parents/family argued more than previously	No	No	Yes	No	Yes	No
Not seeing parent/siblings as much as usual	No	No	Yes	Yes	Yes	Yes
Moved/attended new school	No	No	Yes	No	Yes	Yes
Family member arrested	No	Yes	Yes	Yes	Yes	No
Homeless/Living in refuge/Foster care	Yes	No	No	No	Yes	Yes

Note. Yes = statistically significant at the .10 level or below; No = not significant.

Stressful events which had statistically significant associations with later social wellbeing measured at age 13 are shown in Table 4.6. Stressful events which were not significantly associated with wellbeing at age 13 are not listed.

Teenagers who experienced a death in the family when they were 10 years or younger had lower social wellbeing at age 13. When the bereavement occurred before the age of 7, their social wellbeing worsened from ages 10 to 13.

Illness in early childhood (before the age of 7) was associated with significantly lower social wellbeing at 13. Experiencing illness of parents or other close family members before the age of 10 was also associated with lower social wellbeing at age 13.

Seeing a crime or accident between the ages of 7 and 10 was associated with lower social wellbeing at age 13.

Abuse, at any age, was associated with lower social wellbeing at 13 years. Teenagers who experienced domestic abuse, no matter when it occurred, had lower social wellbeing later. Victimization between the ages of 7 and 10 was associated with lower social wellbeing later. When either domestic abuse or victimisation outside of the home occurred between the ages of 10 and 13, children had negative changes in their social wellbeing.

Teenagers who experienced parental separation and divorce after the age of 7 had negative changes in their social wellbeing at 13, controlling for previous social wellbeing at 10. Similar findings were shown for not seeing parents or siblings as much as usual. Parental conflict from 7 onwards was associated with lower social wellbeing as well, but this was not significant once previous social wellbeing was taken into account.

Teenagers who moved home and attended a new school from the age of 7 also had lower social wellbeing at age 13 compared to their peers who did not move. When teenagers moved between the ages of 10 and 13, they showed negative changes in their social wellbeing during this period.

Experiencing the arrest of a family member, at any age, was associated with lower social wellbeing. When the arrest occurred before the age of 10, teenagers had worsening social wellbeing as they grew older.

Homelessness or being placed in care before the age of 7 was associated with lower social wellbeing at age 13. Teenagers who were homeless or placed in care after the age of 10 showed negative changes in their social wellbeing from ages 10 to 13.

4.3.5 Relationship between stressful events and school wellbeing at age 13

Table 4.7: Stressful events and school wellbeing at age 13

Significant Stressful Events	Birth to 7 years		Age 7 to 10 years		Age 10 to 13 years	
	Without controls	With controls	Without controls	With controls	Without controls	With controls
Victim of abuse, violence or bullying	No	No	Yes	Yes	Yes	No
Attended new school /moved	Yes	No	Yes	No	No	No
Parents/family argued more than previously	No	No	Yes	No	No	No
Family member arrested	No	No	n/s	No	Yes	No
Homeless/Living in refuge/Foster care	No	No	n/s	No	Yes	Yes

Note. Yes = statistically significant at the .10 level or below; No = not significant.

Stressful events which had statistically significant associations with later school wellbeing measured at age 13 are shown in Table 4.7. Stressful events which were not significantly associated with school wellbeing at age 13 are not listed.

Teenagers who suffered victimisation outside the home at age 7 and onwards had lower school wellbeing than other children. When the abuse occurred between the ages of 7 and 10, children experienced worsening school wellbeing from ages 10 to 13.

Moving and attending a new school before the age of 7 had a positive association with school wellbeing. However, when the move occurred between the ages of 7 and 10, there was a negative association.

Teenagers whose parents argued more frequently from 7 to 10 years had lower school wellbeing at age 13 than their peers.

The arrest of a family member between the ages of 10 to 13 years was associated with lower school wellbeing at age 13.

Teenagers who were homeless or placed in foster care experienced negative changes in their school wellbeing from ages 10 to 13.

4.4 Summary

Our findings show that infrequent but highly stressful events such as domestic abuse, victimisation, homelessness, placement in foster care and parental incarceration can have negative associations with adolescents' educational attainment and wellbeing. Teenagers who experienced these stressful events at some point in their childhood had lower test and exam scores and lower emotional, behavioural, social and/or school wellbeing. In many instances, these stressful events remained significantly associated with outcomes, even when prior educational attainment or wellbeing outcomes were taken into account. This implied that these events have escalating and lingering negative impacts as children mature into adolescents, no matter at what age the event occurred.

Bereavement, illness and exposure to an accident or crime were not associated with lower educational attainment and school wellbeing, but these events were associated with lower emotional, behavioural, and social wellbeing for teenagers, which varied depending on timing of the stressful event and the specific dimension of wellbeing. Family bereavement had continuous, cumulative effects on children's emotional and social wellbeing, long after the event happened. On the other hand, serious illness, injury, or accidents were not related to lower wellbeing once the controls were taken into account, indicating that although these events have negative effects on adolescents' wellbeing, they do not contribute to negative changes in wellbeing across time. Teenagers who suffered bereavement of a family member often had worse wellbeing than those who suffered a parental bereavement. This may, however, be a statistical artefact of the greater numbers of children who experienced family bereavement.

4. The impact of stressful life events at different age periods on later educational attainment and wellbeing

4.1 Stressful life events and children's outcomes at age 13-16

4.1.1 Aim and overview

The Avon Longitudinal Study of Parents and Children (ALSPAC) is an ongoing longitudinal study of children born to mothers resident in the Avon area of England. It has surveyed a cohort of parents and children year on year into adolescence and young adulthood. The data are described further in Section 4.1.2, below

In this chapter, we examine how the ALSPAC children's experiences of earlier stressful events were associated with later teenage outcomes. Specifically, this analysis addresses the questions:

1. Whether family stressful events which occurred over three time intervals (i.e., birth to age 7, age 7 to age 10, and age 10 to age 13) had significant associations with later educational attainment and wellbeing outcomes.
2. Second, to investigate whether family stressful events were associated with changes in educational attainment from 11 to 14 and from 14 to 16 and whether family stressful events were associated with changes in wellbeing outcomes from ages 10 to 13.

For stressful events which occurred before age 10, this analysis explored whether such an event was associated with worsening outcomes as children matured into teenagers, showing negative changes well after the occurrence of the event. For stressful events which occurred after the age of 10, the analysis examined whether such an event was associated with negative changes in teenagers' outcomes, taking into account their previous educational attainment and wellbeing before the event occurred.

Information on stressful events was gathered from parents at three time points in the lives of their children: specifically at 7.5 years, 10.5 years and 13.8 years. We refer to these specific ages as ages 7, 10 and 13. Parents' reports of their children's experience of stressful events were coded into categories such as:

- Death in the family
- Illness in the family
- Exposure to crime or accident
- Financial difficulties
- Parental divorce
- Parents arguing/conflict
- Not seeing parents/siblings as much as usual
- Moving/changing schools
- Domestic abuse
- Victimisation or abuse outside of the family
- Homelessness/placed in care
- Family member arrested

The type and frequency of children's experience of stressful events are discussed in Section 4.1.3, below.

For the teenage outcomes, we examined both educational attainment and wellbeing measures, including:

- National test scores (KS3) at age 14
- National exam scores (KS4) at age 16
- Emotional wellbeing at age 13
- Behavioural wellbeing at age 13
- Social wellbeing at age 13
- School wellbeing at age 13

These outcome measures are described in Section 4.1.4, below.

The analysis demonstrates which stressful events were associated with lower educational attainment and worse wellbeing outcomes for teenagers who experienced these events compared to those who did not. We found that the significance of stressful events depends on the particular outcome being assessed and at what age the event occurred.

Stressful events which were associated with lower educational attainment and wellbeing outcomes for teenagers, no matter what age they occurred, include:

- Domestic abuse
- Victimisation or abuse outside of the family
- Homelessness/placed in care
- Family member arrested

Stressful events which were associated with lower wellbeing outcomes but not educational outcomes, no matter what age they occurred, include:

- Death in the family
- Serious illness of family member or child
- Exposure to accident or crime

Stressful events which were associated with worse educational attainment or wellbeing outcomes, but only when the event occurred when the child was older than 7 years, include:

- Parental divorce
- Parents arguing
- Not seeing parents/siblings as much as usual
- Moving/attending a new school

The rest of this chapter goes through the measures, relationships and results in more detail.

4.1.2 ALSPAC data

ALSPAC is a study of children born to over 14,000 mothers recruited in the Avon area during pregnancy in 1991 and 1992. The children's health and development has been tracked in great detail since that initial recruitment. They and their parents have provided a great deal of genetic and direct physical measures as well as questionnaire data and environmental measures.

The ALSPAC data are unique amongst large-sample UK longitudinal data-sets in surveying a cohort of children year on year. Primary sources of ALSPAC data collection include self-completion questionnaires administered during pregnancy and at regular intervals following the birth, and direct assessment of children in a clinic-based setting.

4.1.3 Stressful events

Data on stressful events come from parental questionnaires collected when the study child was 7 years, 10 years and 13 years. Parents were first asked, “During your study child’s lifetime has anything exceptionally stressful happened to her/him that would really upset almost anyone, such as being involved in a terrible accident, or being abused or some other sort of disaster?” If parents answered yes, parents were then asked an open-ended question, “What is it?”

Parents’ responses to the open-ended question regarding their child’s experience of stressful events were coded using a revised scale based on Tiet’s (2001) Adverse Life Events Scale. Since children often experienced more than one stressful event, each event was coded separately. Stressful events were coded only once according to the closest approximate age period during which they occurred, corresponding to the age gap between the different times of data collection: birth to 7 years, 7 to 10 years, and 10 to 13 years.

Table 4.1 displays the number of children whose parent reported each specific stressful event across the three age periods. The most frequent stressful event experienced by children and adolescents was the death of a family member or friend. This was most often the child’s grandparents. However, there were also several instances of the bereavement of aunts, uncles and siblings.

The second most frequent stressful event was parental separation and divorce.

The third and fourth most common stressful events were injuries or illnesses of family members and the study child, respectively. This included serious illnesses such as cancer, and injuries such as broken limbs and burns.

Experiences of victimisation and domestic abuse were the fifth and sixth most common stressful events, respectively. Experiences of victimisation, abuse, and bullying ranged from being “mugged at knifepoint” to “inappropriate touching from a neighbour”. In a few instances rape was mentioned. Domestic abuse was often directed towards the mother by the partner; however, children were also reported to be victims of physical and mental abuse from fathers and sometimes mothers. It is worth noting that domestic abuse was more common in the early years of childhood (up to age 7). This is likely to be because there was a subsequent separation from the abuser: a quarter of marriages involving an abusive parent ended in divorce. More than half of the children who experienced domestic abuse were homeless, living in a refuge or placed in foster care at some point in time. However, as children approached adolescence, they were more likely to be victims of abuse and bullying outside of the home, than be victims of domestic abuse.

The seventh most common stressful event was not seeing either parents or siblings as much as usual. For 30 per cent of the children whose parents identified this as a stressful event, it

This is a prepublication version of the article. For the final printed version see:

Bilson, A., Featherstone, B., Martin, K., (2017) How child protection's 'investigative turn' impacts on poor and deprived communities. *Family Law* 47: 316-319

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Smacking ban Wales: Police warning over funding

By Jenny Rees

BBC Wales home affairs correspondent

🕒 16 May 2019



Chief Constable Matt Jukes says money would be needed for training officers

More police funding would be needed to implement the proposed smacking ban, a senior police officer has said.

Matt Jukes, chief constable of South Wales Police, said forces would need more resources or it

would impact other areas of policing.

If passed by the Welsh Assembly, the law would **ban smacking** by abolishing the "reasonable punishment" defence.

The Welsh Government said it would work with police to implement the proposed bill in a proportionate way.

Campaigners against the law fear it could criminalise parents.

Mr Jukes gave evidence to the assembly's children committee after the Welsh Chief Officer Group and All Wales Policing Group said they supported the bill in principle, but had some concerns about implementing the ban.

They said it was conceivable a child would be unable to live with a parent who was being prosecuted for smacking them, to prevent interference with the prosecution as well as to protect the child.

- **Smacking ban in Wales a step closer with bill published**
- **Smacking ban: Two views from parents in Cardiff**
- **Fresh call for smacking to be outlawed in the home**

However, Mr Jukes sought to reassure AMs that the ban would not necessarily mean greater numbers of children being removed from family homes.

He said they did not anticipate hundreds of additional prosecutions, but funding would be needed for monitoring the impact of the ban, training and potential changes to systems.

"Actually supporting things like multiagency safeguarding hubs, properly resourced, through local authorities, through any support Welsh Government can bring, would be an enormous fillip to this," he said.

"The answer to where it will come from, if not resourced? It will have to come from somewhere else."

Mr Jukes added it could not be left to police alone to deal with cases.

He said it was important to note that as the Welsh Government's powers develop "you cannot use legislation to make political statements and not have consequential impacts for organisations who have to manage this".

The written evidence from Welsh Chief Officer Group and All Wales Policing Group raised several issues they said needed further consideration.

Alleged criminal behaviour - such as a parent smacking a child - would be disclosed on advanced criminal record checks whether or not it was proven, they said, and there was a risk of malicious reporting against parents or professionals.

Cross-border

The new law would also raise cross-border issues, particularly for incoming tourists.

"Consideration is needed... with regards to how a visitor from England would be made aware that the defence for reasonable chastisement does not exist in Wales when it does in England," they said.

The proposed law would mean children would have the same protection from physical punishment as adults.

Charities including the NSPCC have said the law would bring Wales in line with dozens of other countries.

Speaking to **Claire Summers on BBC Radio Wales**, Jeff Cuthbert, the Police and Crime Commissioner for Gwent said: "We need to make sure the Welsh Government in the development of this legislation understand the issues involved, what the practical difficulties in policing could be."

A Welsh Government spokesman said the purpose of the bill was to help protect children's rights.

"If passed, this bill will ensure children and young people in Wales are legally protected from physical punishment... When we look at countries like Ireland, New Zealand and Malta, which have legal systems similar to ours, there is no evidence that the police and social services have been overwhelmed following law reform."

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NEWS

Wales' smacking ban would see children separated from their parents, warn police

Representatives of Wales' four police forces have raised concerns about the removal of the defence of "reasonable punishment" from parents who smack their children in Wales

By [Katie-Ann Gupwell](#)

14:36, 16 MAY 2019 | UPDATED 14:38, 16 MAY 2019

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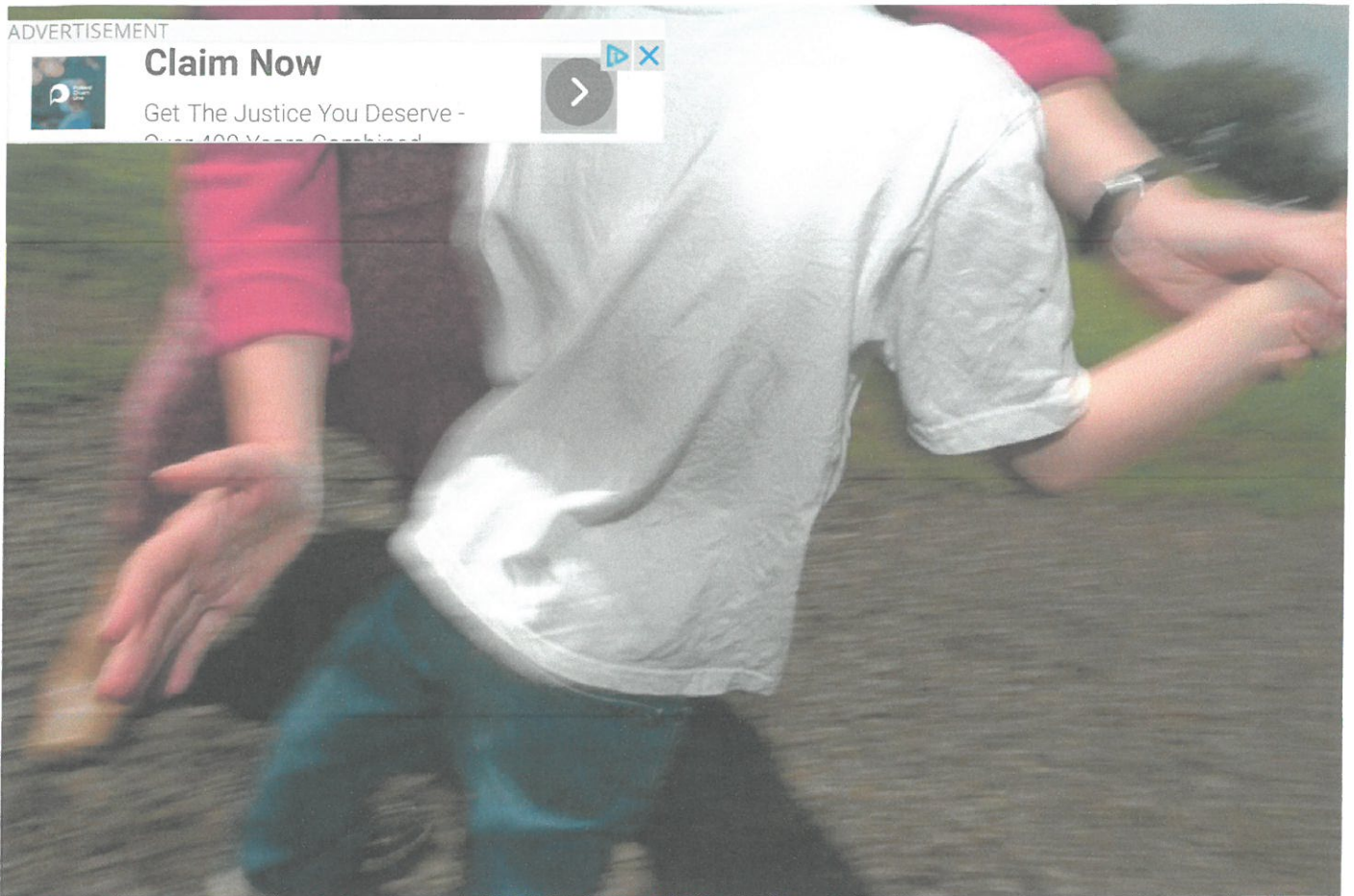
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Concerns have been raised about Wales' plan to ban smacking (Image: Western Mail Archive)

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Children would need to be separated from their parents if there is an allegation of smacking under Wales' proposed smacking ban, police officers have warned.

Wales' four forces have raised several concerns about the Welsh Government's plan to ban parents from smacking their children.

While supporting the principle of removing the legal defence every parent currently has of "reasonable punishment", the four forces warn:

- Children would have to be removed from their parents' home if there is an allegation to enable evidence to be gathered;

- The emotional impact of removing children from their family home "should not be underestimated";
- The risk of "malicious reporting" against parents or care workers due to disputes "needs to be addressed";
- They also say more police resources may be needed to investigate allegations of smacking;
- And they fear people from England who aren't aware of the law may be criminalised while on holiday in Wales.

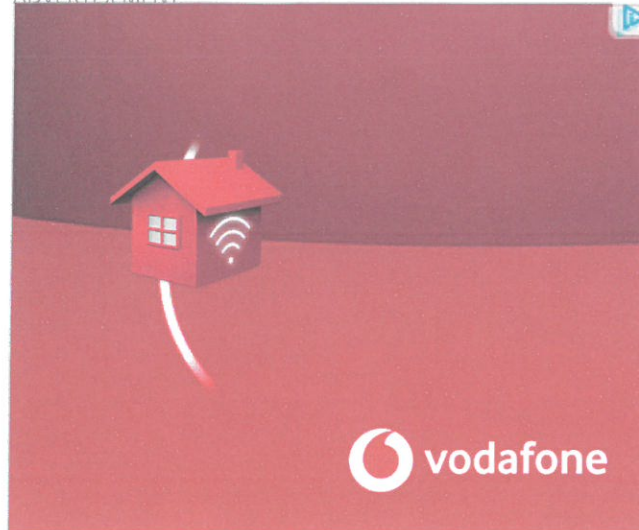
The plan to remove the defence of "reasonable punishment" would have the effect of banning smacking in Wales and is set to become law in Wales through the Children (Abolition of the Defence of Reasonable Punishment) (Wales) Bill, which is being considered by the National Assembly.

The representatives of Wales' police forces gave evidence to the National Assembly's children, young people and education committee as part of AMs scrutiny of the proposal.

Supporters welcome the ban, arguing it will protect young people from assault, but people campaigning against the change fear it could lead to criminalising parents.

In their evidence, the Welsh Chief Officer Group and All Wales Policing Group also raised concerns that an allegation of smacking, even if it was not proven, would be revealed on CRB and DBS checks.

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They raised concern that this could lead to destructive reporting against parents and professionals.

"The risk of malicious reporting against parents or professionals due to disputes or disagreements within either personal or professional settings needs to be addressed and considered further," they wrote.

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Research Letter

April 2016

Use of Mobile Technology to Calm Upset Children Associations With Social-Emotional Development

Jenny S. Radesky, MD^{1,2}; Elizabeth Peacock-Chambers, MD³; Barry Zuckerman, MD¹; [et al](#)

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JAMA Pediatr. 2016;170(4):397-399. doi:10.1001/jamapediatrics.2015.4260

Although it is known that parents of infants and toddlers with difficult behavior disproportionately use television and videos as calming tools,¹ there are no published data regarding to what degree mobile technologies (such as cell phones and tablets) are used for this purpose. Previous qualitative work with parents has suggested that parental perceived control, defined as feelings of control over children's behavior and development, may determine how parents set limits around screen media use² and respond to difficult child behavior.³ We therefore sought to further explore this observation by examining associations between the social-emotional development of toddlers and mobile media use in a sample of parent-toddler dyads, and to determine whether potential associations are modified by parental perceived control.

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Link between
use of technology
increased socio-emotional
difficulties.

Table 2.

Table 2. Bivariate and Adjusted Associations Between Social-Emotional Difficulties and Likelihood of Mobile Media Use During Different Daily Situations^a

Response	Social-Emotional Difficulties on B/P-PSC, No./Total No. (%)	AOR (95% CI)
To calm down when upset		
Not at all/not too likely	21/73 (28.8)	1 [Reference]
Somewhat/very likely	34/66 (51.5)	2.67 (1.26-5.67)
For peace and quiet in the house		
Not at all/not too likely	17/58 (29.3)	1 [Reference]
Somewhat/very likely	39/82 (47.6)	3.63 (1.52-8.66)
While eating		
Not at all/not too likely	46/113 (40.7)	1 [Reference]
Somewhat/very likely	10/25 (40.0)	0.92 (0.36-2.38)
While in public (eg, riding on public transit)		
Not at all/not too likely	34/82 (41.5)	1 [Reference]
Somewhat/very likely	21/54 (38.9)	0.81 (0.37-1.75)
To keep occupied while parent does chores		
Not at all/not too likely	18/47 (38.3)	1 [Reference]
Somewhat/very likely	38/94 (40.4)	1.40 (0.60-3.27)
At bedtime		
Not at all/not too likely	46/115 (40.0)	1 [Reference]
Somewhat/very likely	11/26 (42.3)	1.04 (0.41-2.62)

Abbreviations: AOR, adjusted odds ratio; B/P-PSC, Baby or Preschool Pediatric Symptom Checklist.

^a Adjusted for parent's language (English/non-English speaking), education level (college or more/high school or General Education Development/elementary school), race/ethnicity (White non-Hispanic/black/Hispanic/other), and child prematurity.

Bivariate and Adjusted Associations Between Social-Emotional Difficulties and Likelihood of Mobile Media Use During Different Daily Situations^a

Discussion

This cross-sectional analysis showed significant associations between increased social-emotional difficulties in toddlers and the tendency of low-income parents to use mobile technology to calm their children or keep them quiet, particularly parents who expressed lower perceived control over their children's behavior and development. While reverse causation can also explain this finding (ie, the exposure to technology affecting social-emotional development), we intentionally stratified analyses by perceived control in order to explore the hypothesis that frustration with the child's behavior would lead to use of digital media as a coping strategy. However, we recognize that these results are exploratory and are from a modest-sized low-income sample, so they may not be generalizable. Longitudinal studies are needed to understand the transactional relationship between the use of digital technology and the developmental trajectories of children.

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Article Information

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Aims:
(P)rotect children's rights' 'wider cultural change'
'making clear that physical punishment is unacceptable'
From: Sally Gobbett sallygobbett@googlemail.com
Date: 5 Jun 2019 at 22:42:05
To: Sally Gobbett sallygobbett@gmail.com

"The first thing that a totalitarian regime tries to do is to get at the children, to distance them from the subversive, varied influences of their families, and indoctrinate them in their rulers' view of the world. Within limits, families must be left to bring up their children in their own way."

ARTICLE 8 EUROPEAN CONVENTION ON HUMAN RIGHTS

The Supreme Court found that the information sharing provisions of the 2014 Act breached Article 8 of the European Convention on Human Rights (ECHR) on the right to respect for private and family life. Article 8 ECHR protects family life from unjustified interference by the state. There is a well established method for establishing whether this has been breached. In general terms, this can be summarised as requiring the Court to ask itself:

1. Has there been an interference with the right in question?
2. Is that interference 'in accordance with the law.' This doesn't just mean that it must be written in legislation or clear from court judgements. It has to be clear enough so that a person would know – with advice if need be – what they are allowed to do.
3. Is it necessary? i.e is the interference proportionate?

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- does it pursue a legitimate aim?
- is the objective important enough to justify limiting human rights?
- is the measure rationally connected to the objective
- is there a less intrusive way of meeting the same aim?
- is the impact of the rights infringement disproportionate to the benefit to be achieved

Sent from my iPhone

Is it harmful to smack your child?

Laws banning physical discipline of children are based on faulty science.

Robert E. Larzelere | Feb 14 2017 | 7



In recent years, some medical organizations and many media outlets have claimed that disciplinary spanking causes emotional harm in children that predisposes them to aggressive behaviour when they are older. In an email interview with MercatorNet Professor Robert Larzelere of Oklahoma State University explains what is wrong with the studies on which this view is based. A more detailed critique of the studies by Dr Larzelere and Den A. Trumbull, MD, can be found at the [website of the American College of Pediatricians](#).

The use of spanking – or, more broadly, smacking -- by parents to discipline their children has been banned in [dozens of countries](#) on the basis of studies that show it leads to aggression and mental health problems. The American Academy of Pediatrics “[strongly opposes](#)” spanking on these grounds. Isn’t this settled science?

Anti-spanking advocates would like to convince everyone influential that the worldwide trends for countries to ban spanking is based on settled science. But when they have to defend the adequacy of their science on a level playing field they have been unable to do it. We saw this in the 1996 scientific

consensus conference on corporal punishment¹ and when both sides of the scientific evidence were presented to three levels of the Canadian court system in a case finally decided in 2004.²

The position of the American Academy of Pediatrics, which co-sponsored the scientific consensus conference, was a compromise compared to the draft they had been planning to publish, because the conference exposed how weak the scientific evidence was against spanking.³ All invited participants were able to propose additional statements to the conference summary after thinking more about the scientific evidence and the complexity of various issues about the use of corporal punishment.

It was mostly participants who took a more balanced perspective based on the scientific evidence who took this opportunity, including Drs. Diana Baumrind, Den Trumbull, and Robert E. Larzelere.⁴ The only others were well-respected pediatricians, Robert W. Chamberlin and Rebecca Socolar, who are not known to be anti-spanking advocates but sincerely want to learn what the best advice should be for parental discipline. Those in the conference known to be anti-spanking advocates did not take the opportunity to add statements, or only voted for a few proposals that sided with them. I heard one of them say during the conference something like, "We might as well go home now, since we are not going to get an anti-spanking consensus statement."

The balanced position differentiates between appropriate vs. inappropriate ways to use disciplinary spanking as well as other disciplinary methods and tries to use science to learn what is the best balance for parents to use when disciplining their children. In contrast, the most vocal anti-spanking researchers are primarily interested in imposing their agenda on the world, and producing and highlighting data that seems to support that viewpoint.

The AAP refers to spanking in the context of "harsh physical punishment, such as pushing, grabbing, shoving, slapping or hitting". How do you define spanking? In what circumstances would it be appropriate for a parent to use it?

This illustrates part of the problem in the scientific evidence. The research against disciplinary spanking often lumps appropriate spanking together with overly severe physical punishment and punishment that is inappropriate in other ways. This is what the most-referenced study, the 2002 meta-analysis of the scientific literature by Elizabeth T Gershoff,⁵ as well as a 2016 update by her and A. Grogan-Kaylor,⁶ does. It makes for good advocacy, but lousy science.

The 1996 scientific conference defined spanking as a type of corporal punishment that is "physical non-injurious; intended to modify behaviour; and

administered with an opened hand to the extremities or buttocks." This is a reasonable approximation of what we consider appropriate spanking, if it is used in appropriate circumstances, such as when 2- to 6-year-olds respond defiantly to milder attempts to get them to cooperate.

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Gershoff and colleagues' latest review of the scientific literature claims to study spanking as defined by the scientific conference, but in fact, none of the studies that they use to support their conclusion is limited explicitly to spanking as so defined. For example, very few, if any of the studies go to the trouble of ruling out parents who physically abuse their children from the spanking group. The few studies that exclude abusive parents do not exclude spanking with a paddle or switch – methods that are also outside the definition.

(The type of spanking that has been shown to produce better child outcomes than most other disciplinary options is summarized in response to a later question.)

What exactly is wrong with the methods of Dr Gershoff and others?

We are especially critical of the fact that anti-spanking advocates rely so much on simple, unadjusted correlations, which not only do not prove causation, but make all corrective actions appear to be harmful. That is because correlations do not take account of pre-existing differences in the children being compared. Children who are more seriously oppositional or defiant may remain more so than others regardless of how parents discipline them, but that may be because their prognosis was worse to start with, not because of the corrective disciplinary action itself.

The analogy of chemotherapy may help because it is also a corrective action: correlations would indicate superficially and incorrectly that chemotherapy makes cancer worse, because patients who are receiving chemotherapy now or did so last year are more likely to have cancer now than the rest of us who didn't need chemotherapy last year or this year.

Controlled longitudinal studies (summarised by [Chris Ferguson in 2013](#))⁷ have concluded that children show superficial, trivial adverse effects of spanking that disappear for children under the age of 7. With Ronald Cox and Emilio Ferrer and others^{9,10} I have replicated this strongest type of evidence against customary use of spanking and found very similar evidence against everything *else* that parents use to try to reduce oppositional defiance in young children, including privilege removal, grounding, sending children to their room, docking their allowance, and getting professional help (child psychotherapy or *Ritalin*).

④

In additional analyses, we showed that this trivial, superficially adverse effect is due to what remains of the poor prognosis for children who are frequently oppositional and defiant, not due to customary ways that parents spank their children.

What else does your research show?

With Brett Kuhn⁸ I compared the child outcomes of four types of physical punishment with all disciplinary alternatives that have been analyzed in the same studies with the same methods on the same families. We concluded that the outcomes of physical punishment were worse than alternatives only when the physical punishment was (#1) overly severe or (#2) was the dominant method of discipline.

With other colleagues I have shown that alternative disciplinary tactics lead to the same results as does (#3) customary spanking or customary "physical punishment."^{9,10} Getting professional help in the form of psychotherapy or Ritalin also appears to be just as harmful as customary spanking. In other words, when using the same statistical methods that provide the strongest causal evidence *against* customary spanking, Ritalin appears to be just as harmful as spanking. This shows additional evidence that the superficially harmful outcomes of spanking are due to the remaining poor prognosis of children whose behavior causes parents to use every kind of discipline more, rather than being due to any harmful effect of spanking.

Our review of relevant comparisons also found that the fourth type of spanking, conditional or back-up spanking, led to greater reductions in defiance or aggression than 10 of 13 alternatives it had been compared with. Conditional spanking is non-abusive (e.g., two swats to the rear end when parents are not out-of-control due to anger), used when 2- to 6-year-olds respond defiantly to milder disciplinary responses, such as timeout. A forced brief room isolation is the only alternative shown to produce equivalent outcomes in more than one study. Its equivalent effectiveness was noted in the American Academy of Pediatrics' *Guidance for Effective Discipline*,¹¹ as a reason spanking could be replaced (Bullet Point #8, p. 728), but without specifying what that effective alternatives is, apparently because room isolations are also opposed by advocates on ideological grounds. Despite the fact that this evidence about conditional spanking was based on nine studies, including the four studies with the most valid causal evidence,¹² anti-spanking advocates keep on claiming that there is no evidence of beneficial outcomes of appropriate disciplinary spanking.

Since then, Dr. Majorie Gunnoe¹³ has also shown that, if anything, children who were spanked are doing better as adolescents than never-spanked

children, as long as the spanking ceased after 11 years of age. These are the kinds of evidence that anti-spanking advocates choose to ignore rather than to respond to.

Interestingly, one of the leading anti-spanking advocates also published a recent study ¹⁴ showing that spanking did not have any adverse effects if parents were no longer spanking at age 9, and such phased-out spanking was associated with better outcomes in conservative Protestant families, apparently because it was more likely to be perceived as appropriate parental discipline rather than evidence of parental rejection.

There is, however, an alarming amount of child physical abuse in some quarters of society. Isn't it worth banning physical discipline altogether for the sake of children vulnerable to real abuse? Aren't alternatives like time out and withdrawal of privileges enough for good parents?

This is the main rationale for spanking bans, using the same logic that was used for the Prohibition Amendment in the United States a century ago. Unfortunately most evidence indicates that enforced spanking bans lead to increases in physical child abuse as well as other forms of violence as children grow up without effective discipline.

Recent studies continue to show escalating rates of criminal assaults by minors in Sweden. The first country to ban spanking in 1979, Sweden has enforced this law more vigorously than most other spanking-ban countries. Physical child abuse, criminal assaults against minors by minors, and rapes of children under the age of 15 are occurring more than 20 times as often in 2010 than was the case in 1981, according to Swedish criminal records. ¹⁵

A five-nation comparison in Europe ¹⁶ found that some kinds of verbal and physical violence are higher in countries that have banned spanking compared to those who had not banned spanking. For example, 79% of intimate partners say that they insult their partners in Sweden, compared to 36% in countries without spanking bans. A surprising 34% of partners get tackled or hit in Sweden compared to 18% in countries without spanking bans.

The only evidence that physical abuse decreases after spanking bans comes primarily from countries where most parents were unaware that mild spanking had been banned! Because less than 1/3 of parents in Germany and Austria were aware that mild spanking had been technically banned, the five-nation study compared parents who thought mild spanking was legal (and only severe physical punishment was illegal) vs. parents who recognized that all spanking was banned. Those who thought they could still legally use mild spanking were *less* likely to resort to severe physical punishment.

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There was a similar finding for how they were disciplined as children. Those receiving mild spanking but not severe physical punishment were less likely to use severe physical punishment with their children. This supports a speculation we made in 1999¹⁷ that mild spanking can serve to bring a frustrating discipline episode to a conclusion *before* parents get so frustrated that they erupt by hitting the child harder than they otherwise would.

Also, haven't the people who say that spanking, even if mild, teaches children that "hitting others is OK" got a point?

With that logic, we should quit fighting fire with fire, and we should unilaterally disarm rather than think that a strong military defense will help stop wars against us. Parents' goals should always be to resolve disciplinary disagreements in the best way possible, such as finding a mutually acceptable compromise when applicable or explaining why, if that will help. But children need to learn that they cannot get their way by having increasingly worse tantrums or with increasing aggression, verbal or physical.

One of my mentors, Dr. Gerald Patterson started by trying to reinforce (reward) children for good behavior, assuming that their behavior would improve with that method alone. He still supports reinforcing good behavior, but said in his major book, *Coercive Family Process*, in 1982:¹⁸ "If I were allowed to select only one concept to use in training parents of antisocial children, I would teach them how to punish more effectively. It is the key to understanding familial aggression" (p. 111). By that, he meant timeout, because he personally opposed spanking.

All the other gurus of behavioral parent training -- the primary psychosocial treatment supported for ADHD in the guidelines of clinical child psychologists, pediatricians, and child psychiatrists -- also used timeout, but they recommended a two-swat spanking to enforce cooperation with staying on the timeout chair -- until spanking fell into disfavour in the 1990's.

So parents should prefer the mildest disciplinary response that can get acceptable cooperation from children. But children need to learn that persistent defiance in response to milder responses will not let them get their way. In such cases non-abusive spanking can be a very effective enforcement of milder disciplinary responses, which is why most behavioral parent training protocols recommended that from the late 1960's, when they were developed, to the mid-1990's. By then the gurus could no longer get research funding if they continued using the spank backup (but they never found anything more effective).

And what about children's dignity and rights?

(708)

As children grow up, they develop rights and responsibilities together. We require many things of children that are not required of adults (vaccinations, school attendance). A balance of love and limits, which is called authoritative parenting, has been shown to be optimal for children to achieve their potential. The polarized extremes of authoritarian parenting (limits without love) and overly permissive parenting (love without limits) fall way behind in developing their potential competencies across a range of outcomes.¹⁹

The argument that children should not be subject to negative disciplinary consequences that would be unacceptable for adults is an argument against most negative disciplinary consequence, including timeout, grounding, etc. To maximize their potential, children need both love and limits when they are young, so they don't need to learn lessons about cooperating with people around them when they are older and the negative consequences are worse and longer lasting.

Discipline is obviously an essential but challenging part of raising children. Can people rely on their instincts, or the way they were brought up, to find the right approach for their kids? Do we need more education for parents – new parents anyway?

I would like parents to be able to learn from the best available information, not just from the way they were raised. Unfortunately, the disciplinary messages that are emphasized in the media are based on ideological viewpoints and advocacy efforts rather than objective science. We are trying to provide the kind of fact-checking that seems to be needed more today than in previous generations.

Robert E. Larzelere is a Professor of Human Development and Family Science at Oklahoma State University, specialising in research methodology and the study of parental discipline. He was one of 7 experts invited to present evidence at the only scientific consensus conference on outcomes of corporal punishment, co-sponsored by the American Academy of Pediatrics. He was one of three expert scientific witnesses called by Canada's Dept. of Justice to defend the use of reasonable force by parents to correct children's behaviour. He has published research comparing child outcomes of physical discipline with alternative disciplinary responses based on his own data and on large national data sets from the United States and Canada. He has also published literature reviews of the most relevant studies in leading professional journals in paediatrics and in clinical child psychology.

Den A. Trumbull, M.D. is a founding member of the American College of Pediatricians and was one of 20 experts invited to the 1996 scientific

consensus conference on outcomes of corporal punishment by the co-chairs of that conference.

References

1. Friedman SB, Schonberg SK. Proceedings of a conference on "The short- and long-term consequences of corporal punishment". *Pediatrics*. 1996;98:803-860.
2. *Canadian Foundation for Children Youth and the Law v. Canada*, 1 S. C. R. 76, 2004 SCC 4 (No. 98-CV-158948) (2004).
3. Friedman SB, Schonberg SK. [Personal statement]. *Pediatrics*. 1996;98:857-858.
4. Friedman SB, Schonberg SK. Qualifying statements. *Pediatrics*. 1996;98:854-856.
5. Gershoff ET. Corporal punishment by parents and associated child behaviors and experiences: A meta-analytic and theoretical review. *Psychological Bulletin*. 2002;128:539-579.
6. Gershoff ET, Grogan-Kaylor A. Spanking and child outcomes: Old controversies and new meta-analyses. *Journal of Family Psychology*. 2016;30:453-469.
7. Ferguson CJ. Spanking, corporal punishment and negative long-term outcomes: A meta-analytic review of longitudinal studies. *Clinical Psychology Review*. 2013;33:196-208.
8. Larzelere RE, Kuhn BR. Comparing child outcomes of physical punishment and alternative disciplinary tactics: A meta-analysis. *Clinical Child and Family Psychology Review*. 2005;8:1-37.
9. Larzelere RE, Cox RB, Jr., Smith GL. Do nonphysical punishments reduce antisocial behavior more than spanking? A comparison using the strongest previous causal evidence against spanking. *BMC Pediatrics*. 2010;10(10).
10. Larzelere RE, Ferrer E, Kuhn BR, Danelia K. Differences in causal estimates from longitudinal analyses of residualized versus simple gain scores: Contrasting controls for selection and regression artifacts. *International Journal of Behavioral Development*. 2010;34(2):180-189.
11. American Academy of Pediatrics. Guidance for effective discipline. *Pediatrics*. 1998;101:723-728.

12. Larzelere RE, Baumrind D. Are spanking injunctions scientifically supported? *Law and Contemporary Problems*. 2010;73(2):57-88.
13. Gunnoe ML. Associations between parenting style, physical discipline, and adjustment in adolescents' reports. *Psychological Reports: Disability & Trauma*. 2013;112(3):933-975.
14. Ellison CG, Musick MA, Holden GW. Does conservative Protestantism moderate the association between corporal punishment and child outcomes? *Journal of Marriage and Family*. 2011;73(5):946-961.
15. Larzelere RE, Swindle T, Johnson BR. Swedish trends in criminal assaults against minors since banning spanking, 1981-2010. *International Journal of Criminology and Sociology*. 2013;2:129-137.
16. Bussmann KD, Erthal C, Schroth A. Effects of banning corporal punishment in Europe: A five-nation comparison. In: Durrant JE, Smith AB, eds. *Global pathways to abolish physical punishment: Realizing children's rights*. New York: Routledge; 2011:299-322.
17. Larzelere RE, Johnson B. Evaluation of the effects of Sweden's spanking ban on physical child abuse rates: A literature review. *Psychological Reports*. 1999;85:381-392.
18. Patterson GR. *Coercive family process*. Eugene, OR: Castalia Press; 1982.
19. Baumrind D, Larzelere RE, Owens EB. Effects of preschool parents' power assertive patterns and practices on adolescent development. *Parenting: Science and Practice*. 2010;10:157-201.



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“That’s Not Just Beautiful—That’s Incredibly Beautiful!”: The Adverse Impact of Inflated Praise on Children With Low Self-Esteem

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Abstract

In current Western society, children are often lavished with inflated praise (e.g., “You made an *incredibly* beautiful drawing!”). Inflated praise is often given in an attempt to raise children’s self-esteem. An experiment (Study 1) and naturalistic study (Study 2) found that adults are especially inclined to give inflated praise to children with low self-esteem. This inclination may backfire, however. Inflated praise might convey to children that they should continue to meet very high standards—a message that might discourage children with low self-esteem from taking on challenges. Another experiment (Study 3) found that inflated praise decreases challenge seeking in children with low self-esteem and has the opposite effect on children with high self-esteem. These findings show that inflated praise, although well intended, may cause children with low self-esteem to avoid crucial learning experiences.

Keywords

inflated praise, self-esteem, challenge seeking, late childhood, interpersonal interaction, childhood development, educational psychology, motivation

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“Amazing! You made an *incredibly* beautiful drawing!” At this moment, parents and teachers all around the Western world are giving such overly positive, inflated praise to children. In self-help books, such as *Positive Parenting from A to Z* (Joslin, 1994), parents are encouraged to lavish children with inflated praise such as “Wonderful!” “You did an outstanding job!” “You are terrific!” and “Perfect!” (also see McNeil & Hembree-Kigin, 2010). On the widely known poster titled “101 Ways to Praise a Child,” parents and teachers are similarly encouraged to give children inflated praise such as “Fantastic job!” “Excellent!” and “That’s incredible!”

Inflated praise is often given in an attempt to raise children’s self-esteem. Adults may therefore be especially likely to give such praise to children who seem to need it the most—those with low self-esteem. However, there

is reason to believe that inflated praise can backfire in children with low self-esteem. We propose that inflated praise might discourage children with low self-esteem from taking on challenges.

How Do Adults Praise Children With Low Self-Esteem?

Adults see low self-esteem in children as a pervasive and worrisome problem (Thomaes, Brummelman, Bushman, Reijntjes, & Orobio de Castro, 2013). Consequently, adults

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Study 1

Study 1 examined whether adults are inclined to direct inflated praise at children with low self-esteem.

Method

Participants. Participants were 712 adults (95% women, 5% men; 94% of Dutch origin), ages 18 to 65 ($M = 41.44$, $SD = 6.14$), recruited by means of online advertisements (87% parents, 11% teachers, and 2% other).

Procedure. Participants read six short descriptions of hypothetical children—three with high self-esteem (e.g., “Lisa usually likes the kind of person she is”) and three with low self-esteem (e.g., “Sarah is often unhappy with herself”)—each followed by a description of the child’s performance (i.e., making a drawing, solving a mathematics problem, or playing piano). Participants wrote down the praise they would give the child (Brummelman et al., 2013).

Two independent trained coders, blind to variation in self-esteem, classified participants’ praise as either inflated or noninflated; intercoder agreement was high (Cohen’s $\kappa = .97$). Discrepancies were resolved through discussion. The most common inflated-praise statements were “Very well done!” “You made an excellent drawing!” “Very good that you solved these problems!” “You played the piano very well!” and “That sounded magnificent!” The most common noninflated-praise statements were “Good job!” “Well done!” “You made a nice drawing!” “Good that you solved these problems!” and “You played the piano well!”

Results and discussion

On average, 25% of praise was inflated. As hypothesized, adults gave more inflated praise to children with low self-esteem (33%) than to those with high self-esteem (18%), paired $t(711) = 12.35$, $p < .001$, $d = 0.46$. This effect was not moderated by participants’ age, gender, years of education, or role (i.e., parent, teacher, or other), p s $> .077$.

Given that Study 1 used an experimental design, causal inferences can be made: Low self-esteem in children led adults to give more inflated praise. However, an important unanswered question was whether the findings could be replicated in naturalistic adult-child interactions. Study 2 addressed this question.

Study 2

In Study 2, we attempted to replicate the findings of Study 1 in in-home observations of parent-child interactions.

Method

Participants. Participants were 114 parents, ages 30 to 62 ($M = 43.40$, $SD = 4.15$), who were the primary caregivers (88% mothers, 12% fathers; 95% of Dutch origin), and each parent’s child, ages 7 to 11 ($M = 8.86$, $SD = 0.85$; 51% girls, 49% boys; 87% of Dutch origin). They were recruited through public elementary schools serving lower- to upper-middle-class communities in The Netherlands. Of all parents who were contacted, 56% provided consent for themselves and for their children and participated in the study. All the children gave their assent.

Procedure. Several days before the in-home observation, children completed a standard measure of self-esteem—the six-item Global Self-Worth subscale (e.g., “Some kids are happy with themselves as a person”) of the Self-Perception Profile for Children (Harter, 1985). The children rated these items on 4-point scales (0 = *I am not like these kids at all*, 3 = *I am exactly like these kids*). Responses were averaged across items ($M = 2.11$, $SD = 0.61$, Cronbach’s $\alpha = .78$).

During the in-home observations, each parent administered 12 math exercises to his or her child (i.e., Exercises 5–16 from the Arithmetic subtest of the Wechsler Intelligence Scale for Children–III; Wechsler, 1991). Parents were given a stopwatch and a score sheet and judged whether the children correctly completed each exercise within 30 s (mean number of correct answers = 11.09, $SD = 1.04$). Research assistants left the room until the exercises were completed, which took about 5 min. The sessions were videotaped. Two independent trained coders, blind to variation in self-esteem, counted the number of times parents praised their child and classified the praise as either inflated or noninflated; intercoder agreement was high (Cohen’s $\kappa = .98$). Discrepancies were resolved through discussion. The most common inflated-praise statements were “Very good!” “Extremely good!” “You answered very fast!” “Super good!” and “Fantastic!” The most common noninflated-praise statements were “Well done!” “Good!” “You’re fast!” “You’re doing well!” and “You’re good at this!”

Results and discussion

On average, parents praised their children 6.31 ($SD = 3.95$) times during the session, and 25% of praise was inflated (i.e., the same percentage as in Study 1). Children with lower self-esteem answered fewer questions correctly, $r(112) = .23$, $p = .015$.

The results were consistent with the hypothesis. Children with lower self-esteem received more inflated praise, $r(112) = -.23$, $p = .015$. Self-esteem was unrelated to frequency of noninflated praise, $r(112) = -.14$, $p = .142$.

predictors. Although there were no main effects of praise or self-esteem, $F_s < 1$, $p_s > .384$, there was an interaction between praise and self-esteem, $F(2, 234) = 4.49$, $p = .012$, $\eta_p^2 = .04$. Simple-slopes analysis showed that, as hypothesized, children with lower self-esteem sought fewer challenges after inflated praise, $b = 0.65$, $t(236) = 2.08$, $p = .039$, $\beta = 0.22$, but sought more challenges after noninflated praise, $b = -0.72$, $t(236) = -2.10$, $p = .037$, $\beta = -0.24$. Self-esteem was unrelated to challenge seeking when children received no praise, $b = -0.17$, $t(236) = -0.46$, $p = .645$, $\beta = -0.06$. The interaction was followed-up further using region-of-significance analysis (Preacher, Curran, & Bauer, 2006; $\alpha = .05$, two-tailed; Fig. 1).

As hypothesized, compared with noninflated praise, inflated praise decreased challenge seeking in children who scored 1.30 *SD* or more below the mean on self-esteem but increased challenge seeking in children who scored 0.51 *SD* or more above the mean on self-esteem.

General Discussion

The present research investigated, for the first time, causes and consequences of inflated praise. We found that adults are more likely to give inflated praise to children with low self-esteem than to children with high self-esteem, both inside (Study 1) and outside (Study 2) the laboratory. This inclination may backfire, however. We found that inflated praise decreases challenge seeking in children with low self-esteem and increases challenge seeking in children with high self-esteem (Study 3).

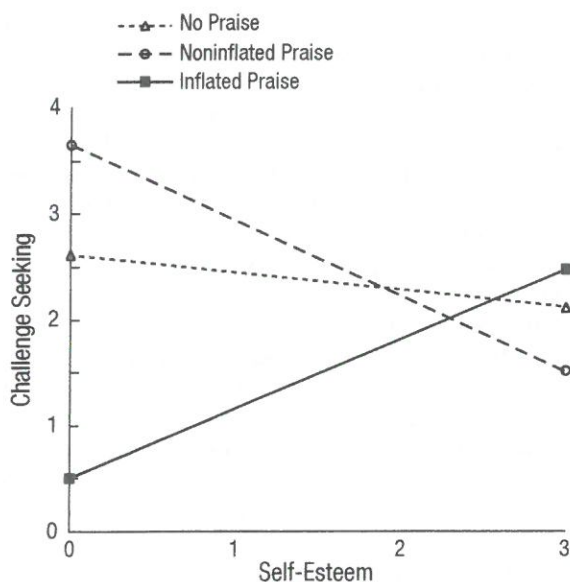


Fig. 1. Results from Study 3: challenge seeking as a function of self-esteem in children who received inflated praise, noninflated praise, or no praise.

Attesting to the subtlety of this process, the difference between inflated and noninflated praise in Study 3 was only a single word—*incredibly*. Although small to an outside observer, this single word may feel quite large to children with low self-esteem, who fear that they might not be able to perform *incredibly* well in the future. Thus, inflated praise can cause children with low self-esteem to avoid crucial learning experiences—a process that may eventually undermine their learning and performance.

Theoretical implications

What psychological mechanisms underlie our findings? Inflated praise may convey to children that they should continue to meet very high standards (Henderlong & Lepper, 2002; McKay & Fanning, 2000). Building on the self-presentation literature (Baumeister et al., 1989; Crocker & Park, 2004), our findings suggest that inflated praise triggers self-protection motives in children with low self-esteem (e.g., “I want to avoid revealing my deficiencies”) and self-promotion motives in children with high self-esteem (e.g., “I want to demonstrate my capacities”). Noninflated praise, by contrast, may acknowledge and value children’s performance without setting very high standards for them. People with low self-esteem, more so than those with high self-esteem, take on difficult tasks in “safe” contexts (e.g., when they are confident that they will meet the standards set for them; Wood, Giordano-Beech, Taylor, Michela, & Gaus, 1994). Accordingly, noninflated praise might reduce fear of failure for children with low self-esteem and thus foster their challenge seeking, but it might fail to provide sufficient impetus to seek challenges for children with high self-esteem.

Our results address alternative explanations. One theory (Meyer, 1992) suggests that children with low self-esteem infer from inflated praise that the provider of the praise thinks they have low ability, and thus the children feel discouraged. Our results show, however, that children with low self-esteem did not make such inferences. Another theory (Sherif & Hovland, 1961; Swann, 2012) suggests that children with low self-esteem find inflated praise insincere, and therefore discouraging, because it mismatches their preexisting views of themselves. Yet our results show that children, even those with low self-esteem, found inflated praise as sincere as noninflated praise.

Our research builds on previous work by examining how praise affects children’s willingness to take on challenges (Gunderson et al., 2013; Mueller & Dweck, 1998; Pomerantz & Kempner, 2013) but extends this work in three ways. First, our research identified a novel dimension of praise—*inflated praise*—and showed that this form of praise is not only common (i.e., accounting for

Consequently, inflated praise might become gradually less influential throughout adulthood. Testing these possibilities will shed light on the developmental boundary conditions under which inflated praise exerts its effects.

Conclusions

In current Western society, everyday life is replete with instances of inflated praise—such as “Perfect!” or “That’s *incredibly* beautiful!” Our research is the first empirical study of inflated praise. Our findings show that adults are inclined to give inflated praise to children with low self-esteem. Unfortunately, inflated praise may cause children with low self-esteem to avoid challenges that might lead to failure. These findings show that inflated praise, although well intended, may cause children with low self-esteem to avoid crucial learning experiences.

Author Contributions

E. Brummelman and S. Thomaes developed the study concept. All authors contributed to the study design. E. Brummelman oversaw data collection. E. Brummelman and B. J. Bushman analyzed the data, and all authors interpreted the data. E. Brummelman drafted the manuscript, and S. Thomaes, B. Orobio de Castro, G. Overbeek, and B. J. Bushman provided critical revisions. All authors approved the final version of the manuscript for submission.

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Declaration of Conflicting Interests

The authors declared that they had no conflicts of interest with respect to their authorship or the publication of this article.

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References

- Baldwin, M. W. (1997). Relational schemas as a source of if-then self-inference procedures. *Review of General Psychology, 1*, 326–335. doi:10.1037/1089-2680.1.4.326
- Baumeister, R. F., Hutton, D. G., & Cairns, K. J. (1990). Negative effects of praise on skilled performance. *Basic and Applied Social Psychology, 11*, 131–148. doi:10.1207/s15324834basp1102_2
- Baumeister, R. F., Tice, D. M., & Hutton, D. G. (1989). Self-presentational motivations and personality differences in self-esteem. *Journal of Personality, 57*, 547–579. doi:10.1111/j.1467-6494.1989.tb02384.x
- Baumeister, R. F., & Vohs, K. D. (2001). Narcissism as addiction to esteem. *Psychological Inquiry, 12*, 206–210. doi:10.1207/S15327965PLI1204_2
- Blackwell, L. S., Trzesniewski, K. H., & Dweck, C. S. (2007). Implicit theories of intelligence predict achievement across an adolescent transition: A longitudinal study and an intervention. *Child Development, 78*, 246–263. doi:10.1111/j.1467-8624.2007.00995.x
- Brummelman, E., & Thomaes, S. (2011). [Parents' beliefs about praise]. Unpublished raw data.
- Brummelman, E., Thomaes, S., Overbeek, G., Orobio de Castro, B., van den Hout, M. A., & Bushman, B. J. (2013). On feeding those hungry for praise: Person praise backfires in children with low self-esteem. *Journal of Experimental Psychology: General*. Advance online publication. doi:10.1037/a0031917
- Burhans, K. K., & Dweck, C. S. (1995). Helplessness in early childhood: The role of contingent worth. *Child Development, 66*, 1719–1738. doi:10.1111/j.1467-8624.1995.tb00961.x
- Bushman, B. J., Moeller, S. J., & Crocker, J. (2011). Sweets, sex, or self-esteem? Comparing the value of self-esteem boosts with other pleasant rewards. *Journal of Personality, 79*, 993–1012. doi:10.1111/j.1467-6494.2011.00712.x
- Corpus, J. H., Ogle, C. M., & Love-Geiger, K. E. (2006). The effects of social-comparison versus mastery praise on children's intrinsic motivation. *Motivation and Emotion, 30*, 335–345. doi:10.1007/s11031-006-9039-4
- Crocker, J., & Park, L. E. (2004). The costly pursuit of self-esteem. *Psychological Bulletin, 130*, 392–414. doi:10.1037/0033-2909.130.3.392
- Crocker, J., & Wolfe, C. T. (2001). Contingencies of self-worth. *Psychological Review, 108*, 593–623. doi:10.1037/0033-295X.108.3.593
- Damon, W. (1995). *Greater expectations: Overcoming the culture of indulgence in our homes and schools*. New York, NY: Free Press.
- Davis-Kean, P. E., & Sandler, H. M. (2001). A meta-analysis of measures of self-esteem for young children: A framework for future measures. *Child Development, 72*, 887–906. doi:10.1111/1467-8624.00322
- Dweck, C. S. (2006). *Mindset: The new psychology of success*. New York, NY: Random House.
- Gundersen, E. A., Gripshover, S. J., Romero, C., Dweck, C. S., Goldin-Meadow, S., & Levine, S. C. (2013). Parent praise to 1- to 3-year-olds predicts children's motivational frameworks 5 years later. *Child Development, 84*, 1526–1541. doi:10.1111/cdev.12064
- Hamilton, M. A., & Hunter, J. E. (1998). The effect of language intensity on receiver evaluations of message, source, and topic. In M. Allen & R. W. Preiss (Eds.), *Persuasion: Advances through meta-analysis* (pp. 99–138). Cresskill, NJ: Hampton Press.
- Harter, S. (1985). *Manual for the Self-Perception Profile for Children: Revision of the Perceived Competence Scale for Children*. Denver, CO: University of Denver.
- Harter, S. (2012). *Construction of the self: Developmental and sociocultural foundations*. New York, NY: Guilford Press.
- Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research, 77*, 81–112. doi:10.3102/003465430298487
- Henderlong, J., & Lepper, M. (2002). The effects of praise on children's intrinsic motivation: A review and synthesis. *Psychological Bulletin, 128*, 774–795. doi:10.1037/0033-2909.128.5.774

SKY online poll 2018:

1019 demographically representative respondents

64% said 'unreasonable' smacking should be banned – which it already is!

17% said no smacking should be banned

15% said all smacking should be banned

i.e. 81% oppose proposed ban to make 'reasonable' chastisement a criminal offence

METRO online poll 2019:

Over 500 demographically representative respondents

27% oppose any form of smacking

44% think a light tap OK under certain circumstances

11% wouldn't smack themselves but think not bad in exceptional circumstances

18% think necessary and not harmful even if regular

i.e. 73% oppose proposed ban



↓ Full text

Comparing child outcomes of physical punishment and alternative disciplinary tactics: a meta-analysis.

Larzelere RE, et al. Clin Child Fam Psychol Rev. 2005.

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Abstract

This meta-analysis investigates differences between the effect sizes of physical punishment and alternative disciplinary tactics for child outcomes in 26 qualifying studies. Analyzing differences in effect sizes reduces systematic biases and emphasizes direct comparisons between the disciplinary tactics that parents have to select among. The results indicated that **effect sizes significantly favored conditional spanking over 10 of 13 alternative disciplinary tactics for reducing child noncompliance or antisocial behavior.** Customary physical punishment yielded effect sizes equal to alternative tactics, except for one large study favoring physical punishment. Only overly severe or predominant use of physical punishment compared unfavorably with alternative disciplinary tactics. The discussion highlights the need for better discriminations between effective and counterproductive use of disciplinary punishment in general.

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REWARDS



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A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation.

Deci EL, et al. Psychol Bull. 1999.

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Abstract

A meta-analysis of 128 studies examined the effects of extrinsic rewards on intrinsic motivation. As predicted, engagement-contingent, completion-contingent, and performance-contingent rewards significantly undermined free-choice intrinsic motivation ($d = -0.40, -0.36, \text{ and } -0.28$, respectively), as did all rewards, all tangible rewards, and all expected rewards. Engagement-contingent and completion-contingent rewards also significantly undermined self-reported interest ($d = -0.15, \text{ and } -0.17$), as did all tangible rewards and all expected rewards. Positive feedback enhanced both free-choice behavior ($d = 0.33$) and self-reported interest ($d = 0.31$). Tangible rewards tended to be more detrimental for children than college students, and verbal rewards tended to be less enhancing for children than college students. The authors review 4 previous meta-analyses of this literature and detail how this study's methods, analyses, and results differed from the previous ones.

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subtilis (fig. S2). The RLP of *B. subtilis* includes both those amino acid residues of RuBisCO that are responsible for binding the phosphate on C1 of RuBP and those required for activation by CO₂. However, the residues of RuBisCO that are responsible for binding the other phosphate group of RuBP and the residues of loop 6, which are essential for RuBisCO activity (2, 3), are replaced by different amino acids in RLP (Fig. 1B). The reaction catalyzed by RuBisCO consists of three sequential, partial reactions: enolization, carboxylation or oxygenation, and hydrolysis (2, 3, 26). Deletion of loop 6 from RuBisCO prevents it from catalyzing the carboxylation/oxygenation reactions (27). However, it retains the ability to catalyze the enolization reaction (27). This observation supports the hypothesis that the RLP-catalyzed enolization of DK-MTP-1-P does not require the amino acid residues that bind the phosphate group on C5 of RuBP and the loop 6. Moreover, the structure of DK-MTP-1-P is very similar to that of RuBP. In photosynthetic RuBisCO, these additional structures may hinder the DK-MTP-1-P enolase reaction, and they may also explain the slow growth of *ykrW⁻rbtC⁺* cells (Fig. 4C). In this context, our results with the RLP of *B. subtilis* suggest that RLPs of other bacteria may also catalyze a reaction similar to one of the partial reactions of RuBisCO in a bacterial metabolic pathway.

Our analysis shows that RLP of *B. subtilis* functions as a DK-MTP-1-P enolase, which has no RuBP-carboxylation activity, in the methionine salvage pathway. Moreover, this function of RLP is conserved in the RuBisCO from a photosynthetic bacterium. In a standard phylogenetic tree of the large subunits of RuBisCO, the RLP from *B. subtilis* is not included on any branches that include RuBisCO or on branches that include other RLPs with RuBP-carboxylation activity (Fig. 1A). The codon usage and the G + C content of the gene for RLP are typical of the organism. The literature (28) suggests that genes such as the gene for RLP were probably not derived by lateral transfer of a gene for a RuBP-carboxylating enzyme from another unrelated organism, for example, in this case, an archaeon or photosynthetic bacterium. Thus, it is possible that the gene for RLP, which in *B. subtilis* is part of the methionine salvage pathway, and the gene for photosynthetic RuBisCO originated from a common ancestral gene (supporting online text). However, bacteria and Archaea that have RLPs first appeared on Earth (29) long before the Calvin cycle developed in photosynthetic bacteria (30), thus we suggest that RLPs may be the ancestral enzymes of photosynthetic RuBisCO.

References and Notes

1. R. J. Ellis, *Trend. Biochem. Sci.* **4**, 241 (1979).
2. T. J. Andrews, G. H. Lorimer, in *Biochemistry of Plants*, vol. 10, M. D. Hatch, N. K. Boardman, Eds. (Academic Press, New York, 1987), pp. 131–218.
3. H. Roy, T. J. Andrews, in *Photosynthesis*, vol. 9, R. C. Leegood, T. D. Sharkey, S. von Caemmerer, Eds. (Kluwer, Dordrecht, Netherlands, 2000), pp. 53–83.
4. G. M. Watson, F. R. Tabita, *FEMS Microbiol. Lett.* **146**, 13 (1997).
5. G. M. Watson, J. Yu, F. R. Tabita, *J. Bacteriol.* **181**, 1569 (1999).
6. S. Ezaki, N. Maeda, T. Kishimoto, H. Atomi, T. Imanaka, *J. Biol. Chem.* **274**, 5078 (1999).
7. F. Kunst et al., *Nature* **390**, 249 (1997).
8. T. E. Hanson, F. R. Tabita, *Proc. Natl. Acad. Sci. U.S.A.* **98**, 4397 (2001).
9. J. A. Eisen et al., *Proc. Natl. Acad. Sci. U.S.A.* **99**, 9509 (2002).
10. H. P. Klenk et al., *Nature* **390**, 364 (1997).
11. J. F. Grundy, M. T. Henkin, in *Bacillus subtilis and Its Closest Relatives: from Genes to Cells*, A. L. Sonenshein et al., Eds. (ASM Press, Washington, DC, 2002), pp. 245–254.
12. B. A. Murphy, F. J. Grundy, T. M. Henkin, *J. Bacteriol.* **184**, 2314 (2002).
13. A. Sekowska, A. Danchin, *BMC Microbiol.* **2**, 8 (2002).
14. E. S. Furfine, R. H. Abeles, *J. Biol. Chem.* **263**, 9598 (1988).
15. R. W. Myers, J. W. Wray, S. Fish, R. H. Abeles, *J. Biol. Chem.* **268**, 24785 (1993).
16. J. W. Wray, R. H. Abeles, *J. Biol. Chem.* **270**, 3147 (1995).
17. Y. Dai, T. C. Pochapsky, R. H. Abeles, *Biochemistry* **40**, 6379 (2001).
18. J. Heilbronn, J. Wilson, B. J. Berger, *J. Bacteriol.* **181**, 1739 (1999).
19. Materials and Methods are available as supporting material on Science Online.
20. A. Sekowska, L. Mulard, S. Krogh, J. K. Tse, A. Danchin, *BMC Microbiol.* **1**, 15 (2001).
21. G. Avigad, *Methods Enzymol.* **41**, 27 (1975).
22. N. C. Kypides, C. R. Woese, *Proc. Natl. Acad. Sci. U.S.A.* **95**, 224 (1998).
23. Y. R. Chen, F. C. Hartman, *J. Biol. Chem.* **270**, 11741 (1995).
24. H. Ashida et al., unpublished observations.
25. V. Vagner, E. Dervyn, S. D. Ehrlich, *Microbiology* **144**, 3097 (1998).
26. W. W. Cleland, T. J. Andrews, S. Gutteridge, F. C. Hartman, G. H. Lorimer, *Chem. Rev.* **98**, 549 (1998).
27. E. M. Larson, F. W. Larimer, F. C. Hartman, *Biochemistry* **34**, 4531 (1995).
28. I. Moszer, E. P. Rogha, A. Danchin, *Curr. Opin. Microbiol.* **2**, 524 (1999).
29. C. R. Woese, O. Kandler, M. L. Wheelis, *Proc. Natl. Acad. Sci. U.S.A.* **87**, 4576 (1990).
30. H. Hartman, *Origins Life Evol. Biosphere* **28**, 515 (1998).
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SOM Text
Figs. S1 and S2
References

19 May 2003; accepted 26 August 2003

Does Rejection Hurt? An fMRI Study of Social Exclusion

Naomi I. Eisenberger,^{1*} Matthew D. Lieberman,¹
Kipling D. Williams²

A neuroimaging study examined the neural correlates of social exclusion and tested the hypothesis that the brain bases of social pain are similar to those of physical pain. Participants were scanned while playing a virtual ball-tossing game in which they were ultimately excluded. Paralleling results from physical pain studies, the anterior cingulate cortex (ACC) was more active during exclusion than during inclusion and correlated positively with self-reported distress. Right ventral prefrontal cortex (RVFP) was active during exclusion and correlated negatively with self-reported distress. ACC changes mediated the RVFP-distress correlation, suggesting that RVFP regulates the distress of social exclusion by disrupting ACC activity.

It is a basic feature of human experience to feel soothed in the presence of close others and to feel distressed when left behind. Many languages reflect this experience in

the assignment of physical pain words ("hurt feelings") to describe experiences of social separation (1). However, the notion that the pain associated with losing someone is similar to the pain experienced upon physical injury seems more metaphorical than real. Nonetheless, evidence suggests that some of the same neural machinery recruited in the experience of physical pain may also be involved in the experience of pain associated with social separation or

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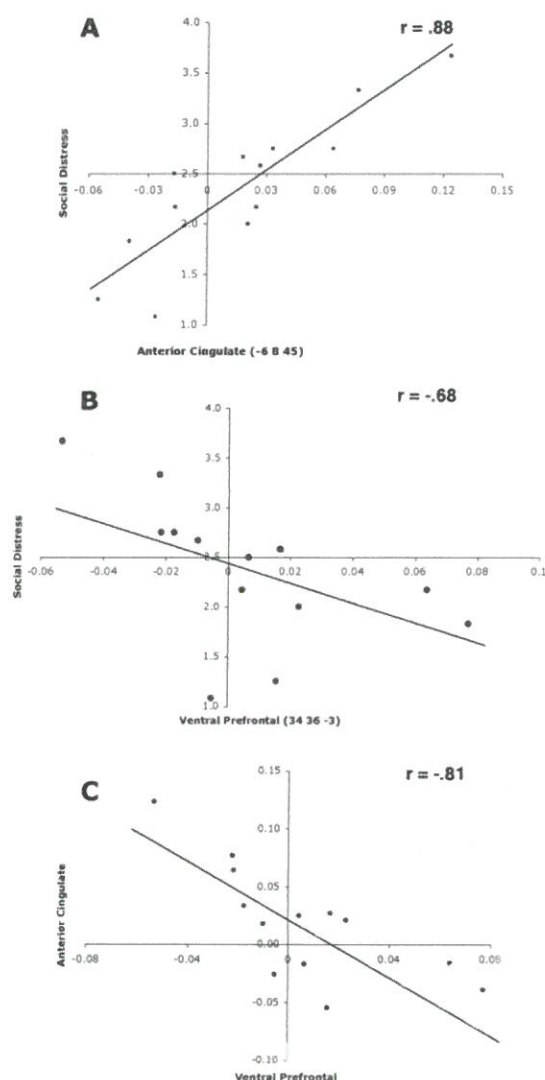
ance of exclusion in the absence of actual exclusion. The pattern of neural activity associated with ISE and ESE provides some challenges to the way we currently understand exclusion and its consequences. Although the neural correlates of distress were observed in both ISE and ESE, the self-regulation of this distress only occurred in response to ESE. Explicit awareness of exclusion may be required before individuals can make appropriate attributions and regulate the associated distress.

Dorsal ACC activation during ESE could reflect enhanced attentional processing, previously associated with ACC activity (4, 5), rather than an underlying distress due to exclusion. Two pieces of evidence make this possibility unlikely. First, ACC activity was strongly correlated with perceived distress after exclusion, indicating that the ACC activity was associated with changes in participants' self-reported feel-

ing states. Second, although inclusion is likely to require greater attentional processing than does ISE to facilitate participation in the game, there was greater ACC activity during ISE than during inclusion, indicating that the ACC activity was not fully attributable to heightened attention.

Because of the need to maintain a realistic situation in which participants would genuinely feel excluded, the study did not contain some of the controls typical of most neuroimaging studies. For instance, the conditions were always implemented in the same order so as to keep expectations consistent from one scan to the next across participants. It was especially critical that ESE came last to prevent expectations of possible exclusion from contaminating the other conditions. There was only a single ESE period to preserve ecological validity. This modification, however, diminishes, rather than increases, the likelihood of Type I errors.

Fig. 2. Scatterplots showing the relation during exclusion, relative to inclusion, between (A) ACC activity and self-reported distress, (B) RVPFC and self-reported distress, and (C) ACC and RVPFC activity. Each point represents the data from a single participant.



This study suggests that social pain is analogous in its neurocognitive function to physical pain, alerting us when we have sustained injury to our social connections, allowing restorative measures to be taken. Understanding the underlying commonalities between physical and social pain unearths new perspectives on issues such as why physical and social pain are affected similarly by both social support and neurochemical interventions (2, 3, 25), and why it "hurts" to lose someone we love (1).

References and Notes

1. M. R. Leary, C. A. Springer, in *Behaving Badly: Aversive Behaviors in Interpersonal Relationships*, R. Kowalski, Ed. (American Psychological Association, Washington, DC, 2001), pp. 151-175.
2. J. Panksepp, *Affective Neuroscience* (Oxford University Press, New York, 1998).
3. E. Nelson, J. Panksepp, *Neurosci. Biobehav. Rev.* **22**, 437 (1998).
4. G. Bush, P. Luu, M. I. Posner, *Trends Cognit. Sci.* **4**, 215 (2000).
5. C. S. Carter et al., *Proc. Natl. Acad. Sci. U.S.A.* **97**, 1944 (2000).
6. T. A. Kimbrell et al., *Biol. Psychol.* **46**, 454 (1999).
7. P. Rainville, G. H. Duncan, D. D. Price, B. Carrier, M. C. Bushnell, *Science* **277**, 968 (1997).
8. N. Sawamoto et al., *J. Neurosci.* **20**, 7438 (2000).
9. E. L. Foltz, E. W. White, *J. Neurosurg.* **19**, 89 (1962).
10. M. R. Murphy, P. D. MacLean, S. C. Hamilton, *Science* **213**, 459 (1981).
11. P. D. MacLean, J. D. Newman, *Brain Res.* **450**, 111 (1988).
12. J. P. Lorberbaum et al., *Depress. Anxiety* **10**, 99 (1999).
13. P. Petrovic, E. Kalso, K. M. Petersson, M. Ingvar, *Science* **295**, 1737 (2002).
14. A. R. Hariri, S. Y. Bookheimer, J. C. Mazziotta, *Neuroreport* **11**, 43 (2000).
15. D. M. Small, R. J. Zatorre, A. Dagher, A. C. Evans, M. Jones-Gotman, *Brain* **124**, 1720 (2001).
16. M. D. Lieberman et al., in preparation.
17. S. T. Carmichael, J. L. Price, *J. Comp. Neurol.* **363**, 615 (1995).
18. C. Cavada, T. Company, J. Tejedor, R. J. Cruz-Rizzolo, F. Reinoso-Suarez, *Cerebr. Cort.* **10**, 220 (2000).
19. Y. Q. Zhang, J. S. Tang, B. Yuan, H. Jia, *Pain* **72**, 127 (1997).
20. L. Zadro, K. D. Williams, reported in K. D. Williams, T. I. Case, C. L. Govan, in *Responding to the Social World: Implicit and Explicit Processes in Social Judgments and Decisions*, J. Forgas, K. Williams, W. von Hippel, Eds. (Cambridge University Press, New York, in press).
21. K. D. Williams, C. Cheung, W. Choi, *J. Personal. Soc. Psychol.* **79**, 748 (2000).
22. Materials and methods are available as supportive material on Science Online.
23. The correction for multiple comparisons was carried out with an uncorrected P value of 0.005 and a cluster size threshold of 10, corresponding to a per-voxel false positive probability of less than 0.00001 (24).
24. S. D. Forman et al., *Magn. Reson. Med.* **33**, 636 (1995).
25. J. L. Brown, D. Sheffield, M. R. Leary, M. E. Robinson, *Psychosom. Med.* **65**, 276 (2003).
26. We thank A. Satpute and the staff of the University of California, Los Angeles, Brain Mapping Center for their assistance. This research was funded by a grant from the National Institutes of Mental Health (R21MH66709-01) to M.D.L.

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Materials and Methods

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