

Personal Background

I have a PhD in Psychology and a Diploma in Jurisprudence from Sydney University. Since the beginning of 2013 I have been an Adjunct Research Fellow at the Key Centre for Ethics, Justice, Law and Governance at Griffith University. I have more than two decades' experience as a policy analyst, researcher and program administrator in the Commonwealth Public Service, mostly in social policy. During 2003 and 2004 I worked as a Senior Researcher and Consultant at the National Institute for Governance at the University of Canberra. Between 2006 and 2012, I contributed lectures on *Approaches to Social Policy* and *Administrative Justice and Review* for the Master of Public Policy course at ANU. After moving to Brisbane at the end of 2011, I worked on contract as Social Policy Analyst for Goodstart Early Learning.

1. Research into risk, ECE participation and development

The material below is influenced by my experience in social policy and research together with the findings of research commissioned by Goodstart and conducted in collaboration with Dr Nicholas Biddle from the ANU. This research examined the relationship between exposure to developmental risk in early childhood, participation in Early Childhood Education and Care (ECE) - either pre-school or Long Day Care (LDC) – and a range of development outcomes in the first year of school.

The analysis was based on data about risk factors and participation in a form of ECE from Wave 3 of the Longitudinal Study of Australia's Children (LSAC), conducted in 2007-8 when the children were aged 4-5, and data on developmental outcomes collected in Wave 4, when the children were in their first year of school.

The report "Development risk exposure and participation in early childhood education: how can we reach the most vulnerable children?" is available for download at <https://coombs-forum.crawford.anu.edu.au/hc-coombs-publications>.

Findings from this research with relevance to specified terms of reference for this inquiry are set out below. The report provides reference material on risk factors and early childhood development.

2. The current and future need for child care in Australia, including consideration of the following: the needs of vulnerable or at risk children (ToR 2(k))

2.1 Developmental risks and risk burden

"Developmental risk factors" refers to conditions in early childhood that compromise development and increase the chance of poor outcomes. Risk factors operate in a cumulative fashion over the life of the individual. However, the nature and pace of brain development in the years before school mean that the young child is particularly sensitive to environmental conditions – those that protect against stress and promote healthy development, as well as those that cause excessive stress and promote vulnerability.

"Risk burden" refers to lifetime exposure to risk factors. As risk burden increases, poor outcomes become increasingly likely. In fact, the lifetime risk of poor health, low educational attainment, poor labour market participation and behavioural and relationship problems is strongly associated with early childhood risk burden. The most potent risk factor is "toxic stress", caused by emotional or physical neglect or abuse.

Epigenetic changes brought about by environmental risk factors play an important role in determining whether particular genes are expressed or turned off. Lasting changes to physiological systems of arousal and self-regulation can be caused by exposure to environmental stressors. These changes illustrate how the effects of environmental conditions can be embodied in the developing child.

2.2 Study findings on risk burden and vulnerability

We analysed the LSAC data set on 25 risk factors. Some of these are well known:

- Poverty
- Unemployed parents
- Sole parent
- Teenage mother
- Mother¹ has low education
- Mother has a mental illness
- Parent has a drug or alcohol addiction
- Remote or disadvantaged neighbourhood
- Indigenous child
- Parents speak a language other than English or have difficulties with English
- Child has low birth weight or a disability
- Housing instability or crowding (more than 2 persons per bedroom)
- Exposure to chronic, high level conflict between parents

However, many other risk factors are not so well known, although they may be important when devising policy to address the needs of vulnerable children, particularly those who need to be removed from their families and placed in foster care. They include:

- Poor parenting skills
- Child is less than two years old before acquiring a younger sibling
- Child has same age sibling (ie child is a twin, triplet etc)
- Child is in a family with more than 3 children
- Mother (or primary carer) works long hours (more than 40 hours per week)
- Child watches more than 4 hours of television per day
- Child has a difficult temperament
- Parents read seldom to the child
- Unstable parents

Note that exposure an individual risk factor on its own will not necessarily lead to poor developmental outcomes. However, our study replicated the common finding that the likelihood of poor outcomes on a range of measures in the first year of school increased with increasing risk burden.

Policy makers will recognise that many risk factors are commonly found together (eg poverty, poor neighbourhood, unemployment, low parental education), and some individual risk factors , such as post natal depression or chronic poverty, may on their own cause the child to experience “toxic stress” – high level, intense, chronic stress, which is associated with extreme developmental vulnerability.

Further research will enable us to assign weights to individual risk factors in the study and clarify the role of protective factors.

2.3 The role of high quality ECE

Participation in high quality ECE has been shown to mitigate developmental vulnerability – it increases the chances of good outcomes in vulnerable children. A UK study showed that two years of high quality ECE gave a child the same advantage as a mother with a university education.²

¹ Mother is used as shorthand for primary carer, although in some cases another person may have that role.

² Sylva K, Melhuish E, Sammons P, Sira-Blachford I & Taggart B (2010) *Early Childhood Matters; evidence from the Effective Pre-school and Primary education Project*, Routledge, p99

On the other hand, a number of studies have shown that participation in poor quality ECE produces poorer developmental outcomes.³

2.4 Study findings on access to ECE by the most vulnerable

Analysis of the relationship between risk burden and participation in ECE during the data collection period of 2007-8 showed:

- There was a negative association between risk burden and participation in pre-school. In other words, the most vulnerable children were the least likely to attend pre-school. This did not hold in disadvantaged neighbourhoods.
- There was no significant association between participation in LDC and risk burden.

This indicates that although some success had been achieved in increasing participation in pre-school amongst children in disadvantaged neighbourhoods, the most vulnerable children, as determined by risk burden, were not successfully targeted.

3. The contribution that access to affordable, high quality child care can make to optimising children's learning and development. (1(b))

As indicated in 2.3 above, high quality ECE can operate as a protective factor, mitigating vulnerability and increasing the likelihood of improved developmental, whilst poor quality ECE can have the opposite effect.

3.1 Study findings on effect of ECE participation and risk burden on development outcomes

The LSAC data enabled us to examine the relationship between development outcomes in Wave 4, when the children were in their first year of school, and risk burden, and ECE participation respectively, as measured during Wave 3, in 2007-8. Separate analyses were carried out for each of six outcome measures comprising: teacher's assessment of the child's overall achievement; literacy; numeracy; non-cognitive skills; as rated in the Strengths and Difficulties Questionnaire; and self-rated school adjustment.

We found that:

- Participation in ECE was associated with better outcomes when the relationship between risk burden and participation was ignored.
- After controlling for risk burden, participation in pre-school was associated with only one improved outcome measure - maths.
- Participation in LDC was associated with an increased likelihood of poor outcomes on all measures, and this association strengthened with increasing hours of attendance.
- When risk burden was controlled, differences in outcomes between Indigenous and non-Indigenous children were no longer statistically significant. This was also the case for other vulnerable groups.
- As a whole, boys had a slightly higher risk burden than girls, but even after controlling for risk burden, outcomes for boys were significantly worse than for girls.

It is most important to note that the National Quality Standards were not in place at the time the subject children participated in either pre-school or LDC.

³ Eg Magnuson M, Ruhm C & Waldfogel J "Does pre-kindergarten improve school preparation and performance?" NBER Working Paper No. 10452 at (2007)

The finding that, after controlling for risk burden, poorer outcomes were more likely when children participated in LDC and the fact that the effect was stronger the longer the hours of participation, should at least act as a warning to policy makers who contemplate reducing ECE standards.

Even participation in pre-school did not mitigate risk burden across all outcome measures, but, at least it was not associated with poorer outcomes.

A recent review of the evidence base on early childhood education found that:

Process quality features—children’s immediate experience of positive and stimulating interactions—are the most important contributors to children’s gains in language, literacy, mathematics and social skills. Structural features of quality (those features of quality that can be changed by structuring the setting differently or putting different requirements for staff in place, like group size, ratio, and teacher qualifications) help to create the conditions for positive process quality, but do not ensure that it will occur.⁴

High teacher qualifications and low ratios, particularly with the youngest children, address some known risk factors. In fact, risk factors associated with multiple birth, large family size and poor parenting skills, indicate that great care needs to be exercised in the development and implementation of appropriate quality standards for ECE, even though they still require educators (and parents) to engage in positive and stimulating interactions with children in order to be effective in promoting cognitive and social development.

RECOMMENDATIONS

- 1. Treat meeting the developmental needs of young children as an investment in the most important element of national infrastructure: human capital. This should be seen as an over-riding and urgent goal rather than a hopeless ideal. Policy that does not bring this goal closer to achievement is heading in the wrong direction.**
- 2. Prevent wherever possible the exposure of young children to the risk factors that lead to developmental vulnerability – particularly those that cause toxic stress. Prevention will have significant short term budget implications across a wide range of government portfolios. Non-prevention on the other hand will have even more significant budgetary implications down the track.**
- 3. Base ECE policy on the best evidence about what is effective in promoting development. If ECE policy results in an increase in the risk burden of young children, it will not be in the national interest even if it increases female workforce participation and increases the profits of service providers.**
- 4. Develop a plan for the provision of universal early childhood services of the requisite high quality and duration in the shortest possible time, taking into account the need to attract public support for further investment in these services where necessary.**
- 5. Undertake further research to investigate the increased vulnerability of boys and the implications of that research for ECE and child care services.**

⁴ Yoshikawa et al (2013) [Investing in Our Future: The Evidence Base on Preschool Education](#), Society for Research in Child Development, Foundation for Child Development, p6

4. The current and future need for child care in Australia, including consideration of the following: interactions with relevant Australian Government policies and programmes. (ToR (I))

Australia's performance in international education rankings has been sliding. I believe that this slide can be seen in large part as the result of failure to compensate in education and other social policies for the effects of socio-economic disadvantage and the steepening gradient in income and wealth inequality.

The OECD has prepared an index of "resilience" - the extent to which variance in scores on PISA tests is not explained by socio-economic disadvantage⁵. My own preliminary analysis suggests that there is a positive association between country resilience rankings and PISA test rankings.

Government policies that used to be considered as providing a "social wage" act to even out socio-economic disparities in access to fundamental services including education, health, transport, justice, and welfare - whether in tax subsidies or transfers. They can also act as a brake on wage claims (during the Accords of the early eighties).

As indicated above, the risk factors that play such an important role in early childhood cover a range of government portfolios. Preventing chronic exposure to risk factors could be seen as a measure that increases the social wage and mitigates the impact of growing inequality.

The gap in achievement between disadvantaged and privileged children is apparent by 18 months and, without effective intervention, continues to grow over the school years. Providing universal access to high quality ECE, with additional support services to help prevent children from falling behind, seems the obvious place to start if improved educational performance in high school is ever to be achieved.

RECOMMENDATION

6. Improving Australia's international education ranking needs to start with early education policy and involve other policies that compensate for the effects of growing inequality.

⁵ The calculation is accomplished by establishing the relationship between socio-economic background and performance across all PISA participants, and by then comparing the performance of each disadvantaged student against the average performance predicted for students with similar background. The difference is the student's "residual performance". A student is resilient if his/her performance is amongst the top quarter of residual performance from all countries. See "Strong Performers and Successful Reformers in Education: Lessons from PISA for the United States", OECD 2011 Note 11 p. 61