



# Behind the headlines

## Early Childhood Education and Care Literature Review Summary

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### Introduction

Brainwave Trust Aotearoa was established in 1998 to share research regarding the impact of early experiences on children's development and subsequent outcomes. The Trust wishes to see all New Zealand children nurtured so they can reach their potential. To do this, Brainwave reviews and collates world-wide research from multiple disciplines which is then used to inform those whose decisions impact the lives of children.

Through seminars, workshops, articles, a website and Facebook page, Brainwave informs parents and professionals about brain development and the risk and protective factors that can influence children's outcomes.

A question frequently asked by audience participants is "How does attending childcare affect children's development?" Brainwave's desire to answer this question accurately led to undertaking a literature review regarding the effects of Early Childhood Education and Care (ECEC) on children. A substantial review of the literature was followed by consultation with experts and approval by the Brainwave Scientific Advisory Group.

This document highlights some key findings, which are fully explained and referenced in the literature review, available at:  
<https://brainwave.org.nz/article/our-literature-search-into-childcare-how-are-the-children-doing/>

### Summary of Findings

#### Early Intervention Studies

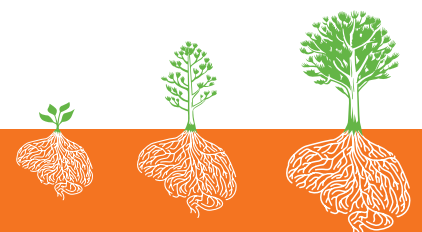
**The frequently repeated reports of lasting benefits regarding education, employment, reduced crime and associated economic benefits are not attributable to typically available ECEC or even high quality ECEC. They are attributable to multi-faceted early interventions for at-risk children that included parenting intervention and health services, in addition to very high quality ECEC, for children largely aged 3-4 years, usually for 12-15 hours per week.**

As these targeted early interventions bear little resemblance to ECEC available in NZ, similar outcomes cannot be expected here. What these results really indicate is this - when at-risk children access a much higher quality of ECEC than what is typically available in their community, and their families have comprehensive additional support, they are likely to have improved outcomes.

#### Outcomes of ECEC

In terms of cognitive or academic outcomes the review found that any beneficial effects of ECEC are largely seen as a result of high-quality ECEC received during the preschool years, i.e. at 3-4 years of age, rather than at younger ages. Much of the available research compares a specific ECEC programme to a variety of typically available childcare, therefore does not illustrate the effects of ECEC per se, nor ECEC compared with parental care, but rather the effects of higher quality care over lesser quality care.

The review found that in some contexts ECEC attendance has been associated with adverse effects on children's behaviour that may persist until adolescence. However, this depends upon a number of factors. This risk is heightened when ECEC attendance occurs at young ages, before 2 years and particularly before 1-year. Results are more mixed when children attend at 3-4 years of age. These findings are of concern given the large proportion of children who may be affected, and the social and financial implications of this.



Research looking at children's cortisol (a stress hormone) production indicates that cortisol patterns differ on days that children attend childcare, compared to days they are cared for by parents. These effects are more likely when attending full-day as opposed to part-day childcare.

A number of adverse physical health outcomes have been associated with ECEC attendance. These include – increased rates of respiratory, digestive and general illnesses; increased rate of anti-biotic treatments; and, a greater likelihood of overweight/obesity in later childhood. The younger the child, the greater the adverse health effects are likely to be. There appears to be a dose-response effect, with those attending more hours of childcare at increased likelihood of more frequent illnesses than those attending for fewer hours.

The studies reviewed found an increased likelihood of insecure attachment associated with childcare attendance. This risk appeared greatest for infants attending childcare in their first year of life, for those attending full-time rather than part-time childcare, and when occurring alongside other risks, such as poor quality childcare.

There are many factors that can influence a child's development, one of which is ECEC. Research indicates that generally:

#### Children can benefit from ECEC when:

- They are around 3 - 4 years of age
- They attend part-time
- The care is high quality and stable

#### There can be risks associated with ECEC:

- When children are younger than 3 years, particularly younger than 1 year
- With increasing amount of time spent in ECEC
- When ECEC is poor quality and/or unstable

### Vulnerable Children

- Despite many claims to the contrary, this review did not find strong support for the efficacy of ECEC in improving outcomes for vulnerable children.
- There are some indications that vulnerable children are more likely to benefit from ECEC that is of high quality, than their more advantaged peers
- However, the quality of childcare available to vulnerable children is often poorer than that available to more advantaged children
- Any benefits typically relate to 3–4-year-olds, rather than younger children, and there is little evidence to indicate the positive effects are long-lasting
- Children attending poor quality ECEC, and coming from environments of increased risk are particularly likely to be adversely impacted

**To be truly effective, efforts to improve outcomes for vulnerable children should consider a range of intervention options, including directly supporting parents in their home.**

### Dose-Response Effect

As with most factors impacting child development, the amount of exposure, sometimes referred to as "dose" is an important variable. With regard to ECEC, there is huge variability in the amount of ECEC children attend, ranging from 0 to 10 000 hours over the years from birth to school. Particularly before the age of 3 years, research indicates there is no threshold but a linear dose-response relationship, with increasing amount of childcare associated with increased rates of behavioural difficulties.

### Quality of ECEC

Higher quality care may minimise the risks associated with ECEC but does not necessarily remove them. The literature review indicates that young children in excellent childcare are likely to have better outcomes than those in poor childcare. However, this does not mean ECEC is superior to parental care. Much of the research literature involves comparisons being made between higher quality and lower quality care. Few studies compare the effects of ECEC with parental care, making it very difficult to draw conclusions about the effects of ECEC per se.

**If children are to attend ECEC, clearly this should be of very high quality. This does not mean that high quality childcare is beneficial for all children, just that it is preferable to poor quality childcare.**

### Stability of Care

For children attending ECEC, those with stable care are likely to do better than those experiencing changes in their care. However, amongst children attending childcare, multiple arrangements and instability of care are common. Children attending multiple concurrent arrangements, or those whose childcare arrangements change, are more likely to have adverse outcomes, including poorer physical health and wellbeing, and social and behavioural difficulties. Instability as a result of staff changes is more common in for-profit services, which make up the bulk of ECEC provision in NZ.

### Conclusions

Research indicates that responsive, nurturing care during a child's first few years of life supports healthy brain development. The impact is significant, long term, and influences how a child behaves, responds emotionally, learns at school and ultimately becomes a productive member of society. Careful consideration needs to be given before more children, particularly under the age of 3 years, are encouraged to be placed in ECEC.

This review has implications for future decisions on ECEC. In particular:

- The age of children going into ECEC
- The amount of time children spend in ECEC
- The quality of the childcare readily available, particularly for vulnerable children
- The range of intervention options for vulnerable children, including those that work directly in the home with parents
- The health ramifications of the outcomes described above
- The risks associated with ECEC compared with the importance of responsive parenting, particularly for the under-3-year-olds.

