

EARLY CHILDHOOD EDUCATION

Introduction

Early childhood development significantly influences subsequent life chances and health, and investing in the early years is one of the most effective ways to reduce health inequities due to the social determinants of health [24]. Children who do not develop necessary non-cognitive skills such as self-control early in life are at greater risk of later school and social failure particularly in adolescence [58].

Targeted investment in evidence-based education, prevention and treatment programmes directed towards at-risk children and their families has a high rate of social and economic return. Programmes that address the needs of parents and children at the same time appear to be particularly effective [58]. Health benefits of Early Childhood Education (ECE) for disadvantaged children persist into adulthood with lower prevalence of risk factors for cardiovascular and metabolic diseases [59] [60].

In New Zealand, ECE is provided by parent-led and teacher-led services including Nga Kohanga Reo, Playcentres, Playgroups, Kindergartens and centre- or home-based Education and Care services. Regional Health Schools provide teachers to children in hospital, or who are at home and unable to attend ECE because of illness [61]. Participation rates in early childhood education (ECE) need to improve further to be on track towards the Government target of 98% of children starting school with prior participation in quality early childhood education by 2016 [62].

The following section uses Ministry of Education data to review enrolments in early childhood education (ECE), as well as the proportion of new entrants who had participated in ECE prior to school entry.

Data Source and Methods

Indicators

1. Number of enrolments in licensed early childhood education services

Numerator: Total number of enrolments in licensed early childhood education services

Denominator: Not applicable (see notes below)

2. Average weekly hours attended by children at licensed early childhood education services

The average weekly hours of attendance of regular enrolments in ECE by service type

3. Proportion of new entrants who had previously attended early childhood education

Numerator: The number of new entrants reporting participation in ECE prior to attending school

Denominator: The number of new entrants enrolled

Data Source

Ministry of Education <http://www.educationcounts.govt.nz/>

Notes on Interpretation:

Note 1: Enrolment numbers overestimate participation in ECE because of double or triple counting of those children who attend more than one ECE service. This is particularly problematic for three and four year-olds, as they have fairly high rates of participation. To get a more accurate picture of the proportion of children participating in ECE, prior participation in ECE is a better indicator. Enrolment numbers however are a useful indicator of patterns of enrolment across different service types. For a description of ECE service types see <http://www.educationcounts.govt.nz/statistics/ece>

Note 2: The number of new school entrants reporting participation in ECE prior to attending school is a useful measure of ECE participation as it overcomes some of the double counting problems associated with ECE enrolment measures. However no information is provided on the duration of, number of hours in, or the type of ECE attended prior to attending school.

School Socioeconomic Decile: All schools are assigned a decile ranking based on the socioeconomic status of the areas they serve. These rankings are based on Census data from families with school age children in the areas from which the school draws its students. Census variables used in the ranking procedure include equivalent household income, parent's occupation and educational qualifications, household crowding and income support payments. Using these variables, schools are assigned a decile ranking, with decile 1 schools being the 10% of schools with the highest proportion of students from low socioeconomic communities and decile 10 schools being the 10% of schools with the lowest proportion of these students. Decile ratings are used by the Ministry of Education to allocate targeted funding, as well as for analytical purposes.



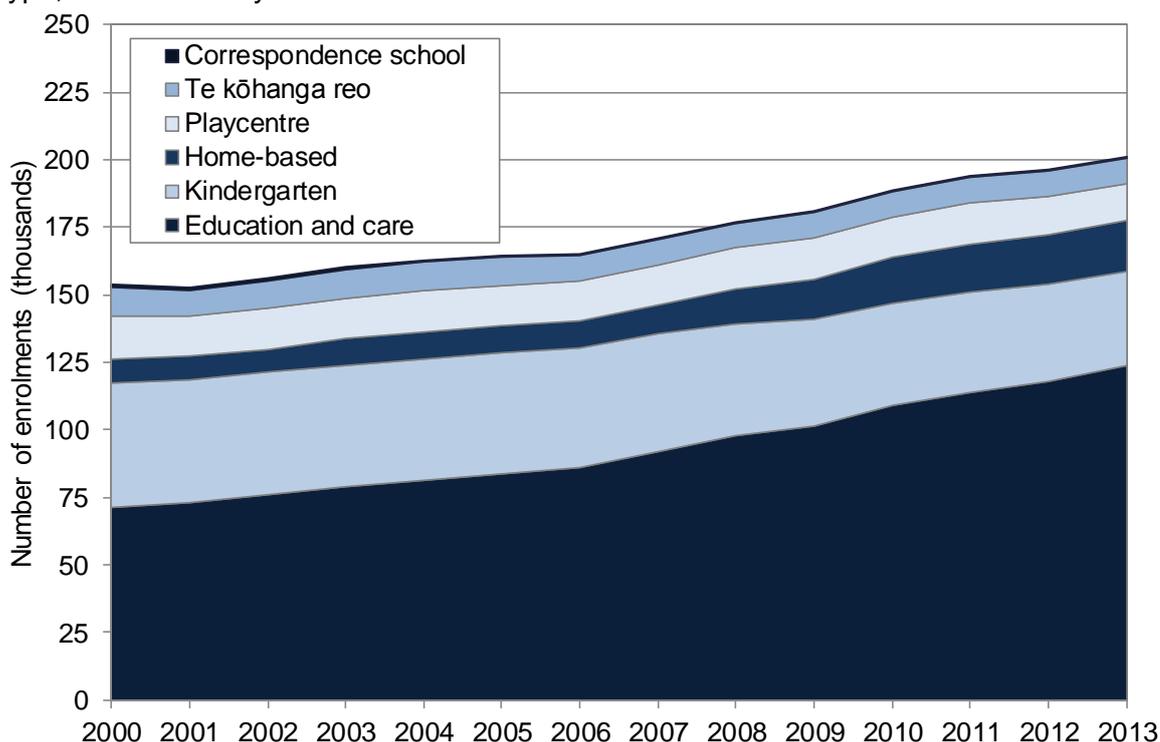
Enrolments in Early Childhood Education

New Zealand Distribution and Trends

Trends by Service Type

In New Zealand from 2000 to 2013, the number of enrolments in early childhood education increased by 30.5%. Changes varied markedly by service type, however, with enrolments in Education and Care increasing by 73.8% and enrolments in Home Based Networks increasing by 110.6%. In contrast, enrolments in Te Kōhanga Reo decreased by 17.6%, enrolments in Kindergarten decreased by 23.7%, and enrolments in Playcentre decreased by 14.2% (**Figure 1**).

Figure 1. Number of enrolments in licensed Early Childhood Education services by service type, New Zealand year ended June 2000–2013



Source: Ministry of Education

Hours Spent in Early Childhood Education

In addition to an increase in ECE enrolments, the average number of hours spent in ECE increased for all service types during 2000–2013, with the exception of Playcentres. The average number of hours spent increased from 16.3 hours in 2000 to 24.7 hours in 2013 for Education and Care facilities, from 11.3 hours to 16.7 hours for Kindergartens, and from 16.8 hours to 22.9 hours for home-based care (**Table 1**).

Table 1. Average weekly hours attended by children at licensed Early Childhood Education services by service type, New Zealand July 2000–2013

Year	Education and Care	Kindergarten	Home-based	Playcentre
2000	16.3	11.3	16.8	5.0
2001	17.2	11.6	18.5	4.8
2002	18.5	11.9	18.1	4.9
2003	18.7	12.1	19.9	4.9
2004	19.6	12.6	21.4	4.9
2005	20.4	12.6	22.5	4.9
2006	20.9	12.6	22.1	4.9
2007	21.6	12.7	22.6	4.8
2008	23.0	13.5	22.9	4.8
2009	23.6	14.2	21.6	4.7
2010	23.8	15.2	21.9	4.6
2011	24.0	15.6	22.0	4.6
2012	24.4	16.0	22.3	4.6
2013	24.7	16.7	22.9	4.6

Source: Ministry of Education

Prior Participation in Early Childhood Education

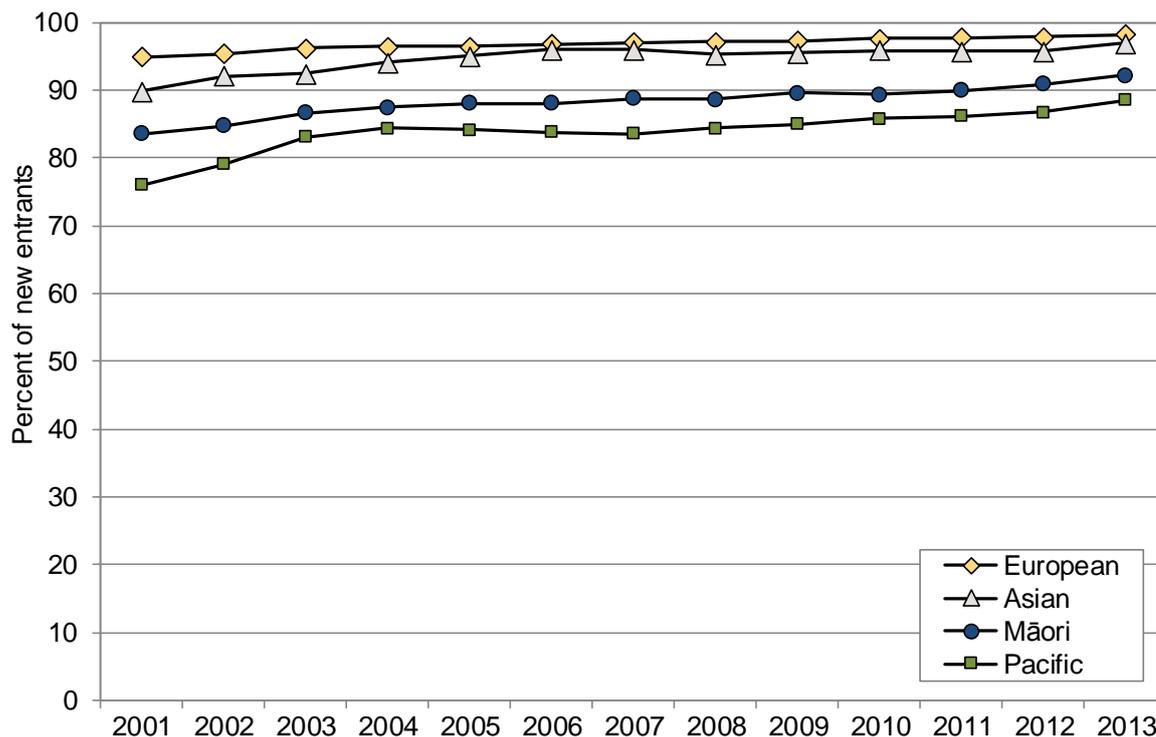
New Zealand Distribution and Trends

Distribution by Ethnicity

In New Zealand, the proportion of new entrants reporting participation in ECE prior to school entry increased, from 90.3% in 2001 to 95.6% in 2013. While prior participation in ECE remained higher for European > Asian > Māori > Pacific children, prior participation increased for all ethnic groups during 2001–2013 (European children 94.9% to 98.2%; Asian children 89.8% to 97.0%; Māori children 83.6% to 92.3%; and Pacific children 76.0% to 88.6%; **Figure 2**).



Figure 2. Percentage of new entrants who had previously attended Early Childhood Education by ethnicity, New Zealand 2001–2013



Source: Ministry of Education; Note: Ethnicity is total response and thus individual children may appear in more than one ethnic group

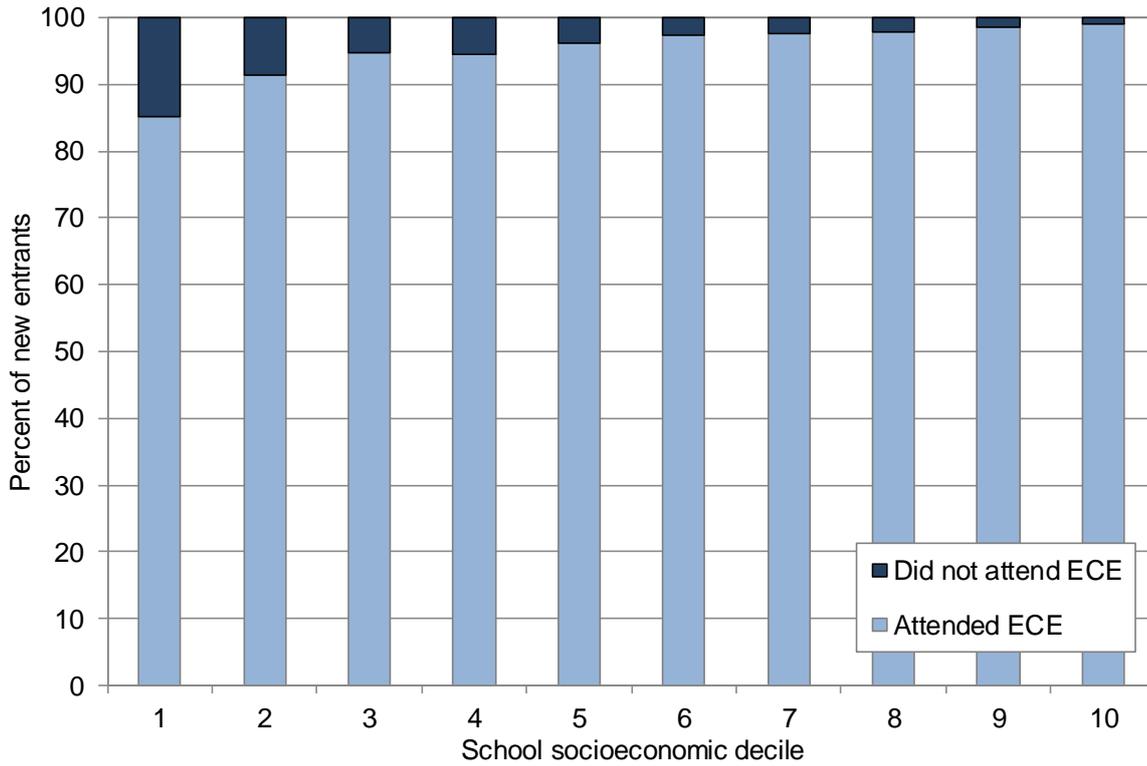
Distribution by School Socioeconomic Decile

In New Zealand during 2013, 14.8% of children attending schools in the most deprived areas (decile 1) had not attended ECE prior to school entry, as compared to only 1.0% of children attending schools in the least deprived areas (decile 10). Nevertheless these figures suggest that on average, 85.2% of children attending schools in the most deprived areas had attended some form of ECE prior to school entry (**Figure 3**).

The proportion of new entrants from the most deprived areas that had participated in ECE prior to school entry increased, from 82.0% in 2011 to 85.2% in 2013, while the proportion has remained fairly consistent for those from the least deprived areas (**Figure 4**).

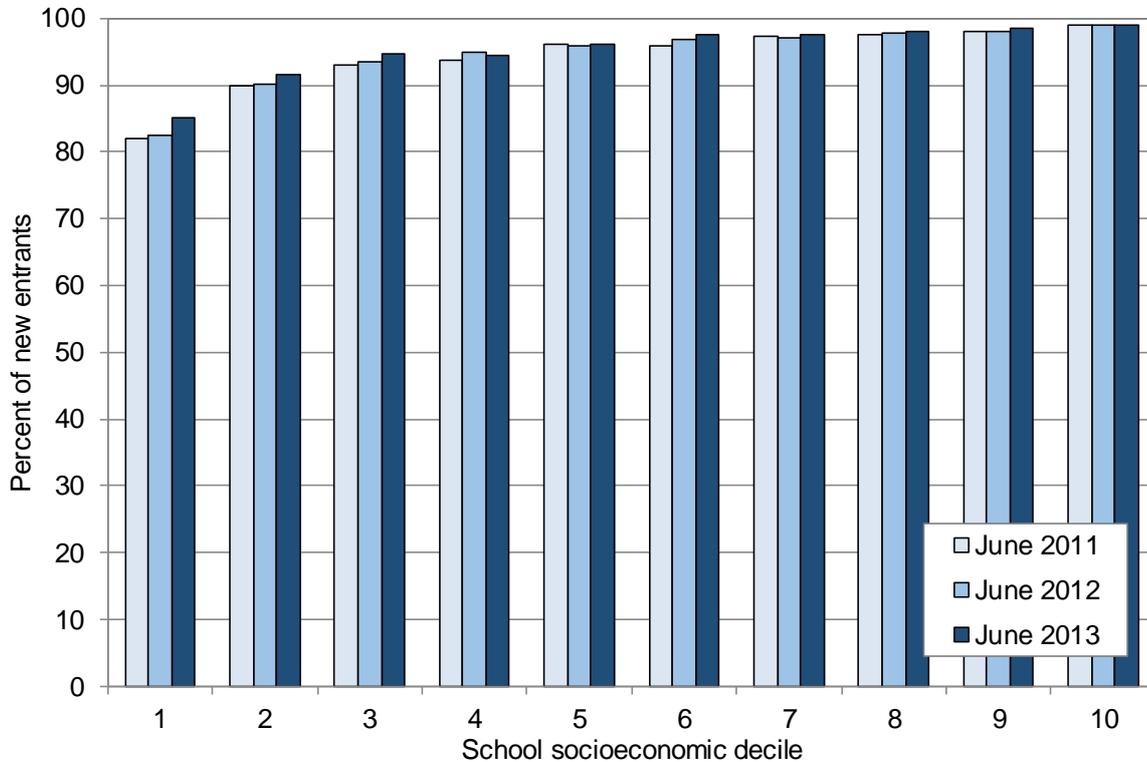


Figure 3. Proportion of new entrants who had previously attended or not attended Early Childhood Education by school socioeconomic decile, New Zealand June 2013



Source: Ministry of Education; Note: Decile 1 = most deprived; Decile 10 = least deprived

Figure 4. Percentage of new entrants who had previously attended Early Childhood Education by school socioeconomic decile, New Zealand year ended June 2011–2013



Source: Ministry of Education; Note: Decile 1 = most deprived; Decile 10 = least deprived



South Island DHBs Distribution and Trends

South Island DHBs Trends

During 2001–2013, prior participation in ECE amongst school entrants increased in all of the South Island DHBs, with rates in the West Coast, and Southern DHB being very similar to the New Zealand rate. In Nelson Marlborough, South Canterbury, and Canterbury, however, rates were generally higher than the New Zealand rate (**Figure 5**).

Distribution by Ethnicity

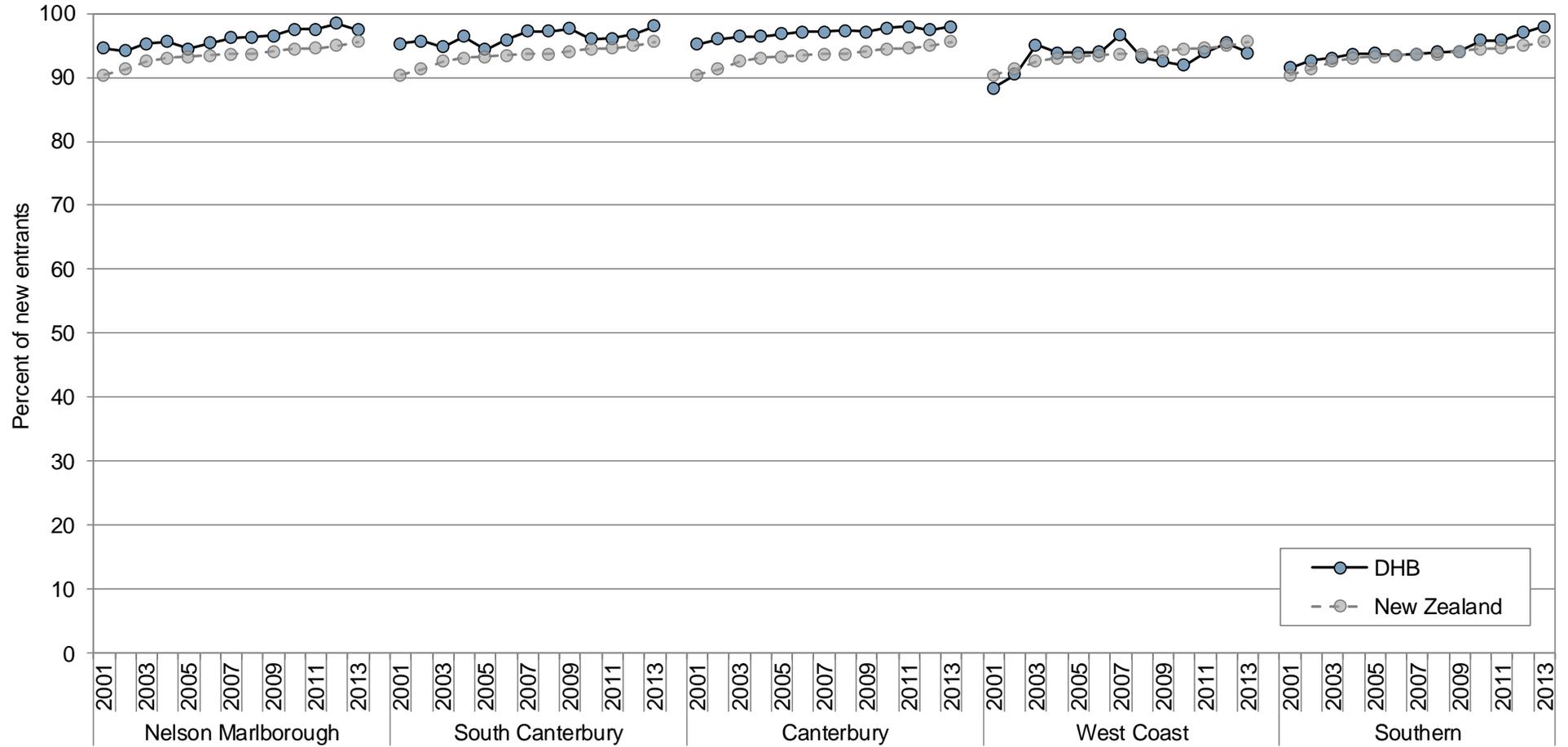
In Canterbury during 2001–2013, prior participation in ECE amongst school entrants was higher for European and Asian children than for Māori and Pacific children, while in the remaining South Island DHBs, prior participation was higher for European than for Māori children, although rates increased for all ethnic groups in all DHBs during this period (**Figure 6**).

Local Policy Documents and Evidence-based Reviews Relevant to Early Childhood Education

Table 2 (on page 119) provides a brief overview of local policy documents and evidence-based reviews which are relevant to Early Childhood Education.

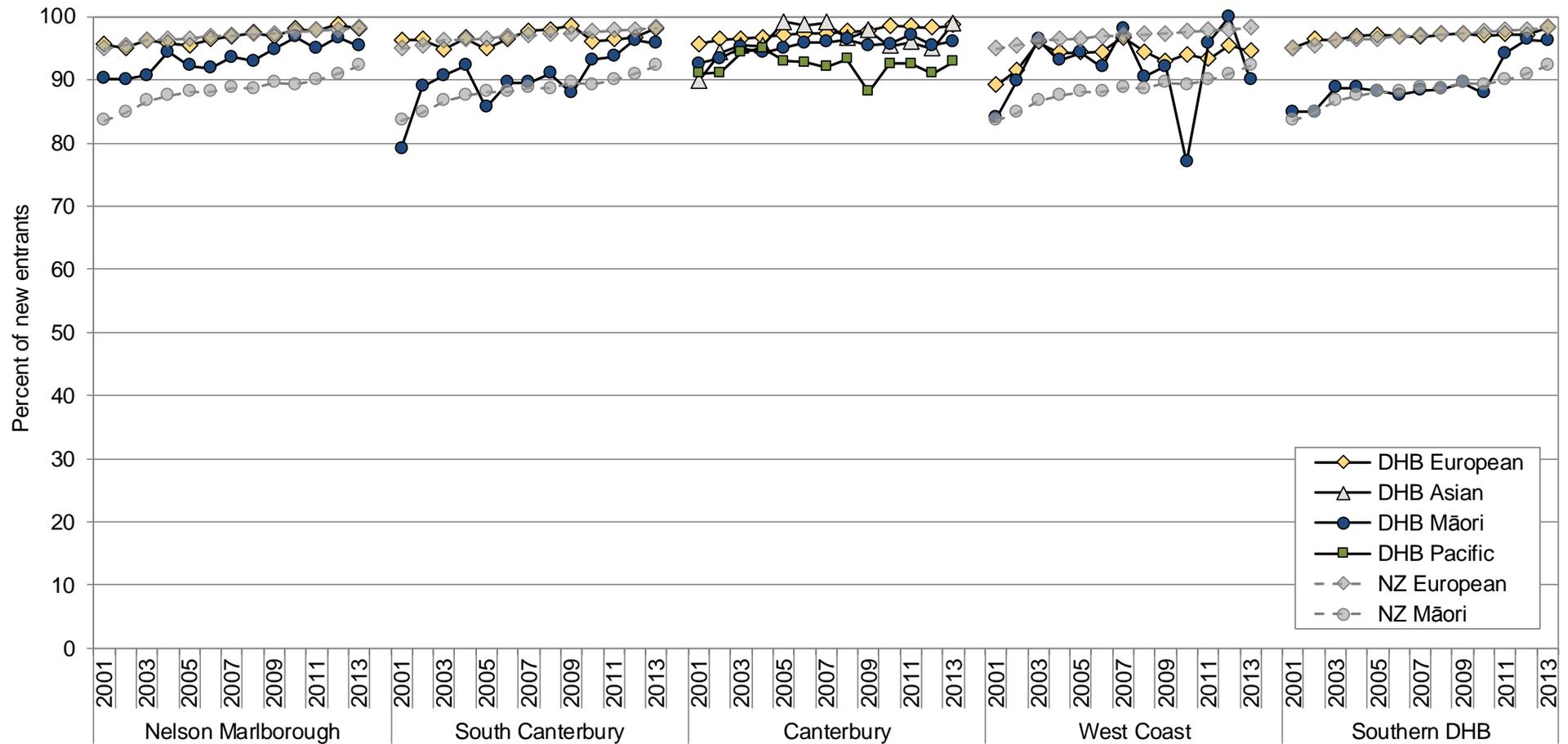


Figure 5. Percentage of new entrants who had previously attended Early Childhood Education, South Island DHBs vs. New Zealand 2001–2013



Source: Ministry of Education

Figure 6. Percentage of new entrants who had previously attended Early Childhood Education by ethnicity, South Island DHBs vs. New Zealand 2001–2013



Source: Ministry of Education; Note: Ethnicity is total response and thus individual children may appear in more than one ethnic group

Table 2. Local policy documents and evidence-based reviews relevant to Early Childhood Education

Ministry of Education publications
<p>Ministry of Education. 2014. Ministry of Education Statement of Intent 2014–2018. http://www.minedu.govt.nz/~media/MinEdu/Files/TheMinistry/2014SOI.pdf</p> <p>The vision of the Ministry of Education (the Ministry) is that all children succeed personally and achieve educational success, recognising that success in education is associated with better health, well-being and higher standards of living. In the early childhood sector the Ministry provides policy advice, licensing of services and funding. Over \$1.5 billion is spent on ECE with over 200,000 children enrolled in over 5,000 services and taught by over 22,000 ECE teachers. The Ministry's strategic direction includes working intensively with iwi and communities to increase participation in quality ECE as part of addressing disparity in achievement, which disproportionately affects Māori and Pasifika children, children from low socio-economic backgrounds, and children with special educational needs. The Ministry restates the Government's goal for 98% of children starting school to have participated in quality early childhood education in 2016.</p>
<p>Ministry of Education. Te Whariki He Whariki Matauranga mo nga Mokopuna o Aotearoa: Early Childhood Curriculum. http://www.educate.ece.govt.nz/~media/Educate/Files/Reference%20Downloads/whariki.pdf</p> <p>The early childhood curriculum is designed specifically for children from birth to school entry and defines how providers of ECE can work towards the vision for children in Aotearoa New Zealand to develop as competent and confident learners and communicators who are healthy in mind body and spirit. One of the essential areas of learning and development is well-being: that the health and well-being of the child are protected and nurtured in an environment that promotes health, nurtures emotional well-being and keeps children safe from harm. This includes health promotion and protection activities such as healthy nutrition and exercise, sun protection and reducing transmission of communicable disease.</p>
<p>Mitchell L, et al. 2014. ECE Participation Programme Evaluation: Delivery of ECE Participation Initiatives: Stage 2 http://www.educationcounts.govt.nz/_data/assets/pdf_file/0006/148524/ECE-Participation-Programme-Evaluation-Delivery-of-ECE-Participation-Initiatives-Stage-2.pdf</p> <p>The Ministry of Education Participation Programme comprises six initiatives to increase ECE participation in communities where a high proportion of children starting school had no prior experience of ECE, with a focus on “priority children” (i.e. non-participating Māori and Pasifika children and children from communities with low socioeconomic status). This evaluation used mixed methods including enrolment data analysis, parent questionnaires, focus groups with community representatives and interviews with parents. The evaluation found some areas for improvement in each initiative. However each initiative was successful in increasing ECE participation by priority children. Barriers to ECE were overcome and parents said the services provided met families' needs. Community engagement and knowledge was a key factor in the success of initiatives and enabled a brokering role in respect to health, housing, and other social services. Although in early stages, the evaluation demonstrates that there are effective ways to increase participation in ECE and improve prior enrolment figures.</p>
Ministry of Social Development documents
<p>Fergusson D, et al. 2012. Early start evaluation report: Nine year follow-up. http://www.msd.govt.nz/documents/about-msd-and-our-work/publications-resources/evaluation/early-start-evaluation-report-nine-year-follow-up.pdf</p> <p>Early Start is an intensive home-based family support system to meet the needs of high-risk families and their children developed in Christchurch since 1995 by a group of health and social service providers. A randomised controlled trial study provides robust evidence of the outcomes for 220 Early Start (ES) families who received the intervention compared with 223 control group (CG) families who received existing child health and related services only. Trained family support workers visited ES families and had flexibility to provide services to meet each family's particular circumstances. They encouraged positive family change in relation to child health, maternal well-being, parenting skills, household financial management, and managing family crises. At 36 months of age ES children showed greater participation in ECE. Other benefits observed at 36 months were still evident at 9 years, when there was evidence that ES children had significantly lower rates of hospitalisation for injury and poisoning (28% for ES vs. 42% for CG), lower rates of parental reported child abuse (9.8% vs. 21.8%), lower rates of parental reported child behaviour problems and experience of more positive and less punitive parenting. The authors consider that having a sound research base, use of professionally trained staff and clear standards and service manuals contributed to the success of the programme.</p>

International guidelines

National Institute for Health and Clinical Excellence. 2012. **Social and emotional wellbeing: Early years**. NICE public health guidance 40 <http://www.nice.org.uk/guidance/ph40>

This guidance is provided for education, health and community agencies and practitioners with responsibility for vulnerable children aged under 5 years, and aims to define how the social and emotional wellbeing of these children can be supported through home visiting, childcare and early education. The NICE recommends that agencies adopt a 'life course perspective', recognising that disadvantage before birth and in a child's early years can have life-long, negative effects on their health and wellbeing, and notes that social and emotional well-being is the foundation for healthy development as well as mitigating risks associated with disadvantage. Recommendations specific to education include ensuring that eligible children are able to take up their entitlements to ECE, facilitating full involvement of parents and caregivers, and providing appropriate indoor and outdoor environments.

Evidence-based medicine reviews

Zoritch B, et al. 2009. **Day care for pre-school children**. Cochrane Database of Systematic Reviews doi:10.1002/14651858.CD000564 <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD000564/abstract>

Eight trials of interventions in which non-parental day care was provided for those <5 years were included in this systematic review of day care for pre-school children. Positive effects were noted, including increases in IQ, benefits to behavioural development and school achievement. Longer term effects were noted in lower teenage pregnancy rates, higher socioeconomic status and decreased criminal behaviour. Mothers' education, employment and interaction with children also benefited. All studies were conducted in the US among disadvantaged populations, limiting their generalisability.

Other relevant publications

Education Review Office. 2013. **Use of Equity Funding in Early Childhood Services**.

<http://www.ero.govt.nz/index.php/National-Reports/Use-of-Equity-Funding-in-Early-Childhood-Services-October-2013>

Equity finding is a funding scheme for eligible ECE services to support, enrol and retain vulnerable children in quality ECE and support their successful transition to school. The Education Review Office (ERO) included specific enquiry about the use of and reporting on allocated equity funding in the regular review process of 147 ECE services. The ERO found that 61% of the services made effective or very effective use of the equity funding through actions such as making ECE affordable, supporting and including children with special needs, engaging parents and whānau as partners in learning and supporting professional learning and development of teachers. Around a third of services had little or no awareness that they received equity funding, and could not account for how it was being used. Challenges to the effective use of funding to reduce disparities include identifying ways to increase involvement of children not already enrolled, rather than only improving participation of those already engaged; working with other agencies to meet the varied needs of children and families, and supporting services to raise the level of educational achievement for vulnerable children. A companion report considers the use of equity funding in Pacific ECE services showed that 11 of 15 services reviewed were using equity funding effectively. <http://www.ero.govt.nz/index.php/National-Reports/Use-of-Equity-Funding-in-Pacific-Early-Childhood-Services-October-2013>

Office of the Children's Commissioner. 2012. **Who gets to play? Promoting participation in ECE for all children**.

Children Winter 2012 No 81. Wellington: Office of the Children's Commissioner.

http://www.occ.org.nz/_data/assets/pdf_file/0019/9910/Children_81_web.pdf

"Who gets to play" is a series of articles by a number of New Zealand early childhood education specialists and researchers who examine the evidence and explore the implementation and implications of decisions, policy and practice in the New Zealand early childhood education setting. The report looks at how the right of the child to high quality care is conceptualised and put into practice. A relationship between quality of early childhood education and child development is consistently found, with high quality services resulting in positive outcomes and poor quality services having a long-lasting negative impact. Issues such as universality and the impact of delivering high quality services to all are examined, particularly with respect to the future of a thriving society.

Conti G & Heckman JJ. 2013. **The Developmental Approach to Child and Adult Health**. Pediatrics doi:10.1542/peds.2013-0252d http://pediatrics.aappublications.org/content/131/Supplement_2/S133.full.pdf+html

This review article brings together information from several studies to look at the long-term effects of childhood education and environment. Long-term follow-up of two early childhood interventions (High/Scope Perry Preschool Project (PPP) and Carolina Abecedarian Project (ABC)) considered health specific outcomes through to adulthood. Compared with a control group who received usual services only, participants in both the PPP and ABC programmes showed consistently better outcomes in levels of education achieved, income, welfare dependence and criminal activity. The authors calculated that early life factors including education and family environment account for at least half the disparity in adult prevalence of poor health, depression and obesity. Analysis of a UK study of a 1958 birth cohort suggested that attributes developed in early childhood can affect the next generation directly, and also through effects on the health behaviour of the pregnant woman.

Note: the publications listed were identified using the search methodology outlined in Appendix 1.