



# Summary of research on physical activity and screen use in childcare

This is the second paper in a series, detailing results from an online survey of 257 Early Childhood Education (ECE) services in Auckland, Counties Manukau and Waikato in mid-2014, called 'Kai time in ECE'. The survey asked questions about nutrition and physical activity policies and practices for three and four year olds in daycare centres, kindergartens, Kōhanga Reo and playcentres. Responses were received from 30% of licensed ECE providers in these regions, and were fairly representative of all services, with the exception of Kōhanga Reo who were under-represented. We expect that this research will be relevant to licensed ECE services throughout New Zealand.

Key findings from the academic paper are below. The full paper is available on our website: [www.growingup.co.nz/kai-time](http://www.growingup.co.nz/kai-time)

## Introduction

Active movement in preschoolers has immediate and long-term physical and mental health consequences, which may track through to later childhood, adolescence and adulthood. In contrast to the widely held perception that children are naturally active and energetic, previous studies in New Zealand and overseas measuring preschoolers' activity have found most three and four year olds are sedentary for large portions of their day in childcare.

Kai Time in ECE is the first research in New Zealand to examine the content of written physical activity policies and discover how often children use 'screens' (computers, tablets, DVDs and television etc.) in childcare. It also provides information on the use of health promotion programmes by ECE services and explores barriers to the promotion of active movement in preschoolers.

## Physical activity policies

One in three ECE services (n=82; 35%) had a written physical activity policy, with a lower proportion of playcentres having a policy compared to other service types. Physical education and a variety of physical activity opportunities were the most commonly included topics in these policies. Private daycare services were more likely than other service types to include the training for teachers in physical education in their written policies. None of the policies addressed screen time or the use of discipline techniques that restrict physical activity (e.g. "time out" or being sent inside).

Overall, services with fewer children per teacher/adult had more comprehensive and strongly worded physical activity policies, even when adjusted for other service characteristics.

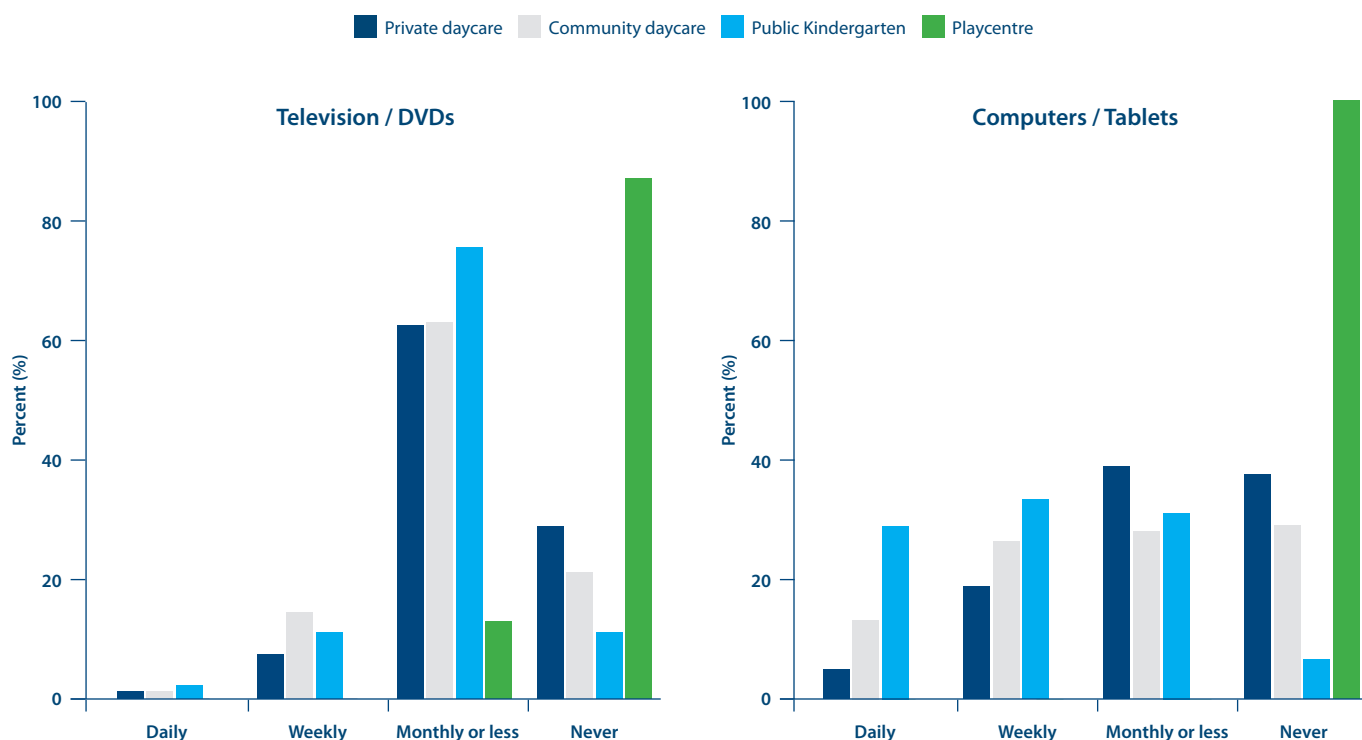


Figure 1: Reported frequency of screen use by three and four year old children while in childcare, by Early Childhood Education service type  
Source: 2014 Kai Time in ECE Survey, Growing Up in New Zealand, University of Auckland

### Screen use

The majority of ECE services reported that children use 'screens', with most children watching television and using a computer or tablet once a month or less while at the service. Children watched television/DVDs daily in 2% and weekly in 11% of services, and used computers/tablets daily in 11% and weekly in 22% of services. Screen-use differed considerably by type of service (see Figure 1).

### Active movement and physical education

Teachers led children in active play for some part of the day in most services (87%). Most ECE services reported using a wide range of strategies, spaces and equipment to promote physical activity. However, a quarter of private daycare centres and playcentres used fewer than five different strategies and equipment types. When the weather was not suitable to go outdoors, 87% of ECE services had enough indoor play space for some active play (e.g. jumping and dancing) and a further 11% had enough indoor space for all activities including running. Most respondents reported that children in their care spent nearly all of their time in active play, which is in contrast to objective measures of children's activity in other New Zealand studies that found children are mostly sedentary while at ECE services.

### Barriers and champions in the promotion of physical activity

Less than one-third of services (n=67; 29%) reported that they experienced a barrier to promoting physical activity to children, with no statistically significant differences by type of service or neighbourhood deprivation. The most common barriers were 'limited opportunity/space for physical education' and limited storage. Insufficient funds were cited by 9% of all ECE services as a barrier to physical activity for children. Other barriers reported by participants were: lack of staff training on structured active play; lack of links with community play and recreation organisations; and safety concerns of parents.

Half of respondents had a person that they considered to be a 'physical activity champion' at their ECE service, that is, someone who shares knowledge and skills about physical activity, raises awareness and promotes positive change regarding physical activity for children, and these were most often teachers. A higher proportion of childcare services with a physical activity champion were involved in a health promotion programme (78%) compared to those who did not have anyone they considered to be a physical activity champion (55%).

## Health promotion programmes

63% of all services participated in a formal health promotion programme, some of which contained a physical activity component (see Table 1).

Table 1: Auckland, Counties Manukau and Waikato Early Childhood Education (ECE) service participation in health promotion programmes

Programme	Total <sup>1</sup> N = 237 n (%)
5+ A Day	80 (33.8)
Jump Rope for Heart	51 (21.5)
Healthy Heart Award (includes committed even if no award)	50 (21.1)
Healthy Heart Award obtained (all levels)	21 (8.9)
Enviroschools	27 (11.4)
Garden-to-Table or Tui Garden Challenge	18 (7.6)
Under 5 Energize	17 (7.2)
Fundamental Movement Skills	7 (3.0)
Other <sup>2</sup>	52 (22.0)
Participation in any health promotion programme	148 (63.0)
Participation in programme that includes a physical activity component <sup>3</sup>	104 (43.9)

Source: 2014 Kai Time in ECE Survey, Growing Up in New Zealand, University of Auckland

<sup>1</sup> See supplementary material in the full academic paper for participation by type of ECE service.

<sup>2</sup> Mostly private programmes or coaching sessions with weekly activities based around motor skill development, e.g. Play Ball, Jiggle/Jump Jam, Gymnastics, Yoga, Dance, PMP.

<sup>3</sup> Only includes the Heart Foundation Healthy Heart Awards if the service had obtained an award.

## Recommendations

Several evidenced-based policy recommendations are made in the paper that would assist ECE services to improve active movement in preschoolers, particularly:

- Comprehensive, strongly-worded physical activity policies;
- Clearer guidelines on the levels of activity and space required for optimum child development in the preschool years;
- Guidelines regarding screen use in under-fives;
- More ECE teacher training on how to engage children in active movement (not only through structured physical education lessons); and
- Increased participation of ECE services in health promotion programmes to encourage 'physical activity champions' within each centre or kindergarten.

## More research underway

Further analyses planned for the survey data include: a dietary assessment of childcare menus; source and preparation of food; and spend per child per day on food. We will also be investigating the health outcomes for children exposed to different ECE environments using data from the *Growing Up in New Zealand* study.

Reference: Gerritsen, S., Morton, S. & Wall, C. (2015). *Physical activity and screen use in childcare: Results from a survey of Early Childhood Education services in the Auckland, Counties Manukau and Waikato regions*. Manuscript submitted for peer-review.

Available from [www.growingup.co.nz/kai-time](http://www.growingup.co.nz/kai-time) when published.

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