

Research Snapshot

The relationship between early childhood education and care and children's development



Background

Early childhood education and care (ECEC) refers to the provision of education and care services for children prior to school. In Australia, a variety of ECEC services are available, including preschool (known as kindergarten in some jurisdictions), playgroup, and centre-based child care. As well as supporting families with child care, ECEC services seek to promote children's social and emotional skills, cognitive, and physical development, helping to prepare children for the transition to school.

Nevertheless, these programs differ in both content and delivery, and thus are likely to have differing impacts on children's development. Reviews of how such programs support children's development have identified specific ways this happens in different programs. In each program type, children are exposed to a range of experiences that promote their development. These can be spontaneous or planned experiences. For example, language rich interactions between children

and caregivers/educators (such as a conversation about what the child is playing with) or a scheduled activity such as story time (where children are read a book and engaged in thinking and talking about the story). High quality ECEC services ensure children's experiences in their setting, both spontaneous and scheduled, promote their development, learning and wellbeing.

Aim

This Research Snapshot aims to summarise research that has explored the relationship between children's attendance at different types of ECEC services and children's development in Australia.

Key findings

Preschool

There is strong evidence of a positive relationship between preschool attendance and children's development at school entry as measured by the Australian Early Development Census (AEDC). Using data representing over 97% of children across Australia in their first year of full-time school in 2009, children who attended preschool in the year before school were found to have significantly lower odds of being developmentally vulnerable on four of the five AEDC domains (Physical Health and Wellbeing, Social Competence, Language and Cognitive Skills, and Communication Skills and General Knowledge) compared to children who did not attend preschool, after taking into account a range of variables that are likely to influence developmental outcomes. Although children living in the most disadvantaged communities were less likely to attend preschool, results showed a stronger association between preschool and development for children from disadvantaged backgrounds, compared to that amongst more advantaged children. These findings reflect the international evidence and suggest that preschool in the year before school is universally beneficial to all children, especially for children from disadvantaged backgrounds.

Research exploring the effects of early entry into preschool (that is, provision for 3-year-olds so that children experience two years of preschool before school) has also been conducted in Australia. Through linkage of nationally representative data from the Longitudinal Study of Australian Children (LSAC) with data from the 2009 AEDC, results showed that children who had started attending preschool at 3 years of age had significantly lower odds of being developmentally vulnerable on the Language and Cognitive Skills AEDC domain after adjusting for variables that influence development, compared to children who had attended preschool at 4 years of age only. Significant effects were not found on other AEDC domains, however, it is important to consider if early preschool provision is beneficial for all children. International research indicates positive effects of early preschool entry for disadvantaged children in particular, though research exploring differential impacts for subgroups of children has not been conducted in Australia. Further research will help to determine the efficacy of early preschool provision for children from different socioeconomic backgrounds in Australia.

Child care

Using LSAC data, the effects of time spent in centre-based child care on children's development at ages 4-5 years, as reported by caregivers and teachers, has also been explored. Results suggest that children who spend a greater number of hours in centre-based child care between the ages of 0-3 years have slightly higher levels of problematic externalising behaviours (e.g. disruptive,

hyperactive, or aggressive behaviour) and lower levels of internalising behaviours (e.g. withdrawn, anxious, or depressed behaviour) at ages 4-5 years, but no evidence of effects on children's receptive vocabulary.

Research has also explored the longer-term effects of centre-based child care on child development. Using LSAC data, greater hours in centre-based child care has been shown to have positive effects on children's fluid intelligence, no effect on vocabulary and academic abilities, and negative effects on children's behavioural functioning at age 7. These findings reflect the international evidence and highlight the need to ensure that ECEC provision supports children's social and emotional skills, in addition to their cognitive abilities. Evidence suggests that children's behavioural development could be influenced in ECEC through carer-child relationships. Research using LSAC data has shown that high quality carer-child relationships in centre-based child care settings were related to better regulation of attention and emotion in children at ages 4-5 years, which remained at age 6-7 years.

Playgroup

Recent research has demonstrated a positive relationship between children's participation in playgroup and development upon school entry in Australia. In the 2015 AEDC, teachers provided information on the playgroup experience of approximately 40% of the national cohort, enabling the investigation of the relationship between playgroup and early development amongst approximately 100,000 children across Australia. Results showed that children who had attended playgroup before school had better outcomes across all developmental domains, compared to children who did not attend playgroup, after controlling for a range of demographic and contextual variables.

The positive effect of playgroup attendance on child development has shown to be stronger for children living in disadvantaged communities. However, children living in disadvantaged communities were least likely to attend playgroup, 1 in 7 compared with 1 in 4 of children living in advantaged communities. Taken together these results suggest that increasing playgroup attendance amongst disadvantaged children in Australia may be one mechanism to help reduce socioeconomic inequalities in child development.

Implications

For policy and practice

Although research has shown that use of ECEC services is positively related to children's developmental outcomes, the evidence is less clear in relation to level of quality, type of service, starting age and dose (i.e., number of hours/week). To better inform ECEC policy, it will also be important to examine these aspects in relation to

socioeconomic background and home environment, which have been related to differing levels of cost-benefit of ECEC. Much of the evidence that does exist regarding ECEC and child development, is derived from US and UK populations, where early childhood services and systems are markedly different to that in Australia. These differences limit the generalisability of international evidence to the Australian context, and highlight the importance of exploring the local evidence base to ensure that policy in Australia is informed by relevant research.

For research

The evidence summarised in this Research Snapshot is observational and describes the association between different forms of ECEC and children's later developmental outcomes. Determining the impact of ECEC on children's outcomes requires experimental research that involves the assignment of participants to either a group who receive the intervention of interest or a control group who do not. Although research exploring the impacts of ECEC on child development has been conducted internationally, experimental research in Australia is limited. This is partly attributed to the difficulties of allocating children to different intervention groups in an education setting.

For further information

About research snapshots

AEDC Research Snapshots provide a brief and accessible overview of research being undertaken in relation to the AEDC. The AEDC programme is funded by the Australian Government. For further up-to-date information consult the AEDC website and its many resources: www.aedc.gov.au.

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