Introduction

International research evidence, gathered over a 40-year period, including large-scale evaluations of programs for disadvantaged children (e.g. Head Start, Abecedarian and HighScope Perry Preschool programs), provides compelling evidence that attendance at high-quality ECEC services can have positive effects on children’s social, cognitive, language and physical development (Harrison et al., 2011; Huston, 2011). This research suggests that benefits for children and families accrue directly as children interact in development-enhancing ECEC settings in which relationships are caring, and where experiences and materials are responsive and individually appropriate. Further, benefits accrue indirectly through families’ increased access to parent advice, social support, and enhanced capacity to participate in the workforce, which in turn leads to increased social inclusion. Moreover, society accrues benefits of children’s participation in early education through children’s increased educational attainment and labour market participation, a reduction in welfare dependency and development of pro-social behaviours.

The promise of benefits for children from disadvantaged backgrounds however, is premised on an assumption that these children attend ECEC services. In this paper, we examine the extent to which disadvantaged children use ECEC services, by drawing on data from LSAC.

Disadvantage in the early years

In this paper we use the term ‘disadvantage’ to include vulnerability and/or marginalisation occurring as a result of a range of negative, historical (e.g. colonialism) and/or contemporaneous structural (e.g. unequal distribution of resources), environmental (e.g. physical isolation), sociological (e.g. racism), physical (e.g. disease or disability), and/or psychological (e.g. drug and alcohol dependence) factors, that are deleterious to wellbeing (Young, 1990). These factors often coexist, are cumulative and, in the absence of protective factors (such as access to resources), can contribute to children’s poor social and cognitive development, deviant behaviour, and poor educational outcomes (Harrison et al., 2011).

There are inherent difficulties and tensions in labelling children and families as disadvantaged, not least that it can stigmatise and ‘other’ (Grieshaber & Canella, 2001). Yet, from a social justice perspective, it is these very
children who should have priority of access to ECEC. Arguably, while labelling comes with a deficiency stigma, it nevertheless allows families and services to access funding and support services. Indeed, using labels for advocacy purposes has been known to generate social and political interest leading to positive change in policies and practices (Henley, Ramsey & Algozzine 2009).

Children from a number of groups have been identified as particularly disadvantaged:

Children with disabilities are amongst the most vulnerable in society and at heightened risk of abuse or neglect compared to their peers (Govindshenoy & Spencer, 2006). A number of physical and policy barriers, lack of resources, misconceptions and discriminatory practices can limit these children’s use of ECEC services (Purdue, 2009).

Children with ongoing, long-term health conditions are disadvantaged due to their requirement of multiple services to manage their conditions, the strain placed on family resources, and the individual impact of managing a long-term health condition (Farmer, Marien, Clark, Sherman & Selva, 2004). This means that ECEC can be particularly difficult to access for those families with children with complex health-care needs (Abbott, Watson & Townsley, 2005).

Children of culturally and linguistically diverse and/or refugee backgrounds can be disadvantaged due to a number of factors linked to their migration experiences. The loss of social status, community support and network can lead to a sense of isolation which can be further compounded by low English proficiency, presence of an accent, experiences of racism and non-mainstream cultural and religious beliefs, and childrearing and educational practices, which often act as barriers to access and utilisation of social services including ECEC (Rivalland, 2010). Aboriginal and/or Torres Strait Islander children often still suffer the consequences of past injustices, as well as continued discrimination. Aboriginal and/or Torres Strait Islander children are widely acknowledged as one of the most disadvantaged groups in Australia (FaHCSIA, 2009) and less likely to use ECEC than their non-Indigenous peers (Harrison, Goldfeld, Melcafe & Moore, 2012).

Children from families of low socioeconomic status have been shown to have poorer outcomes on measures of education, health and wellbeing (Nicholson, Lucas, Berthelsen & Wake, 2012). This is largely associated with families’ limited access to, or ability to mobilise, a range of social resources (e.g. housing, health, nutrition, high-quality ECEC), and children’s higher exposure to risk (e.g. associated with unsafe housing) (Blakemore, Strazdins & Gibbings, 2009; Huston, 2011).

Children whose parents have a long-term health condition can be disadvantaged due to the additional strain (both financial and emotional) that health conditions place on the household (Broomfield, Lamont, Parker & Horsfall, 2010). Likewise, children whose parents have a mental health condition and/or problematic drug and alcohol use may experience chaotic or less effective parenting leading to maltreatment (Meredith & Price-Robertson, 2011).

Children whose parents (particularly mothers) are young have been shown to be at heightened risk of poorer educational outcomes than their peers (Levine, Clifton & Pollack 2005). However, this may be largely attributable to the fact that younger mothers tend to have lower educational attainment and income, rather than to maternal age per se (Bradbury, 2011).

Whilst along with Watamura, Phillips, Morrissey, McCartney and Bub (2011, p. 48), we recognise that ‘no single risk factor is either necessary or sufficient to cause lasting harm’ we contend that those children described above are at heightened risk of negative outcomes. Moreover, combinations and co-occurrences of multiple risk factors increase children’s propensity for negative outcomes (Watamura et al., 2011).

Policy to support use of ECEC by disadvantaged, vulnerable, and/or marginalised children

Increased awareness of the benefits of participating in ECEC for disadvantaged children and families, and the flow-on effects of this for society more generally, together with greater recognition of structural barriers to participation in ECEC services, has led governments around the world to invest heavily in supporting children’s access to both universal and targeted ECEC services (Huston, 2011). In New Zealand, for example, the government funds up to 20 hours a week of early childhood education for children aged three to five years (New Zealand Government Department of Work and Income, 2012). Many European countries, such as France and Denmark, provide free access to pre-school (OECD, 2006); whilst in the USA, the Child Care Development Fund subsidises childcare fees for low-income families and families with a child with a disability, and Head Start provides public preschools for children in poverty (Planta, Barnett, Burchinal & Thornburg, 2009).

In Australia, a number of policies are in place to support the participation of disadvantaged children in ECEC. At the Commonwealth level, Child Care Benefit and Special Child Care Benefit assist families to cover the cost of child care; the Inclusion Support Program is designed to assist childcare services to build their capacity to offer quality, inclusive childcare environments to children with additional needs; and the Council of Australian Governments’ National Partnership Agreement on early childhood education aims to ensure that, by mid-2013, all Australian children will have access to affordable quality early childhood education in the year before full-time mandatory schooling, including initiatives specifically targeted at disadvantaged children (such as
the development of ECEC services integrated with family support in Indigenous communities regarded as highly disadvantaged (DEEWR, 2011). Similarly, at the state level, programs such as the Brighter Futures Program in NSW and the Best Start Program in Victoria support the inclusion of disadvantaged children in ECEC settings.

**Use of ECEC by disadvantaged children**

International literature suggests that with intense policy attention and commensurate fiscal support, disadvantaged children and families’ use of early years’ services increases (The National Evaluation of Sure Start Team, 2012). To date, however, there is no evidence of the extent to which Australian disadvantaged children are utilising ECEC, or if having multiple indicators of disadvantage has an effect on use.

The most recent Australian Bureau of Statistics’ Childhood Education and Care Census published in May 2012 indicates that 85 per cent of children aged four to five years were attending a preschool or preschool program. However, the census does not collect information on child characteristics so it is not possible to determine utilisation by disadvantaged groups. Additionally, in 2010 a national survey (1695 responses) to assess childcare services’ satisfaction with and the appropriateness and effectiveness of the Inclusion Support Program (DEEWR, 2010) revealed that between 75.2 per cent (Queensland) and 89.3 per cent (Australian Capital Territory) of services had a child with a disability or ongoing health need enrolled; between 73.8 per cent (South Australia) and 86.5 per cent (Western Australia) had a culturally and linguistically diverse child enrolled; between 28.3 per cent (Queensland) and 48.1 per cent (South Australia) had a child from refugee or humanitarian background enrolled; and between 23.2 per cent (Victoria) and 66.6 per cent (Northern Territory) had at least one Indigenous child enrolled. While this survey demonstrates that ECEC services in Australia’s states and territories are catering for a number of children from disadvantaged backgrounds, it does not tell us what percentage of these children are using ECEC services, nor does it cover a range of factors likely to contribute to disadvantage.

Another data source for examining use of ECEC in Australia, and which can be used to identify those children who are disadvantaged, is LSAC, a large-scale longitudinal study funded by the Australian Government Department of Families, Housing, Community Services and Indigenous Affairs (FaHCSIA). This commenced in 2004 with over 10 000 children (in two cohorts—Birth and Kindergarten). Now in its fifth wave of data collection, LSAC is one of the largest and most comprehensive Australian studies of the experiences of young Australian children and their families ever undertaken (AIFS, 2012). Harrison and colleagues’ (2009) analysis of the first wave of LSAC data for Kindergarten cohort (age 4–5 years) found that over 95 per cent of the children were attending an ECEC program in a childcare centre, preschool, or the first year of school. Their analyses suggested that there were differences in ECEC utilisation across indicators of disadvantage. For example, children from families with the lowest weekly incomes were more likely to be in the 5 per cent who were not using ECEC nor attending a school-based preschool (highly subsidised and thus a cheaper option for parents). Children from families where the language spoken at home was other than English were the most likely to attend the first year of school programs. Aboriginal and/or Torres Strait Islander children were less likely to be attending an ECEC program than non-Indigenous children. Children of mothers who experienced high psychological stress were also less likely to be using ECEC programs than children whose mothers experienced low psychological stress.

Another study by Maguire and Hayes (2012) examined access to education/care programs in the year prior to starting school by the Kindergarten (K) cohort at Wave 1 and the Birth (B) cohort at Wave 3 (age 4–5 years). Maguire and Hayes’ findings are similar to those of Harrison and her colleagues; that is, most children in LSAC attended an ECEC program in the year prior to starting school (92% K cohort and 81% B cohort). However, children from families in lower socioeconomic positions (SEP) were less likely to attend ECEC programs with a pre-school component than those children from families with higher SEP. Further, children who mainly spoke a language other than English at home were less likely to be attending any form of ECEC in the year before starting school than those who spoke mostly English at home. Aboriginal and/or Torres Strait Islander children were also less likely to be in any ECEC program.

More recently the Australian Institute of Family Studies was commissioned by the Department of Education, Employment and Workplace Relations to explore the access to early childhood education in the context of the National Partnership on ECE in Australia. Findings of this report were published in 2013 (see Baxter & Hand, 2013). This study conducted analyses from available national data sets. Data of children who were most likely to be in institutionalised care in the year prior to full-time schooling were identified and analysed from the National Survey of Parents’ Child Care Choices (NSPCCC) (2009) and the Longitudinal Study of Australian Children (LSAC) (2008). The Australian Early Development Index (AEDI) (2009) provided data for the majority of Australian children in their first year of full-time schooling in 2009 and also data on the access and utilisation of care of children in the year prior to formal schooling. The Childcare Education and Care Survey (2008) also provided data on the factors influencing parental decision making and barriers to participation in ECE. Findings were analogous to those of Harrison et al. (2009) and those of Maguire and Hayes (2012) in that the
group of children who most needed ECE were the ones who were not accessing any kind of ECE programs in the year prior to formal schooling.

These three studies suggest that there are barriers to use of ECEC for some of Australia’s most disadvantaged children. However, further analyses are needed to determine the extent of ECEC utilisation by children from the full range of disadvantaged groups and whether utilisation is influenced by the presence of multiple indicators of disadvantage. The current study aims to (i) identify utilisation of ECEC by disadvantaged children—more broadly defined here as children who: have a disability and/or ongoing health-care need; and/or are of culturally and linguistically diverse background; and/or are Aboriginal and/or Torres Strait Islander status; and/or whose family is of low SEP; and/or have at least one parent with a long-term health condition, and/or mental illness, and/or problematic drug and alcohol use. Unfortunately, due to limitations of the LSAC (data on refugee status are not collected) it was not possible to explore utilisation of ECEC by children from refugee backgrounds. The study also aims to (ii) identify the cumulative effects of disadvantage on children’s utilisation of ECEC. It does so by developing an index of disadvantage (hereafter—Disadvantage Index—DI).

This paper addresses the following questions:

1. Are there differences in the utilisation (type and hours per week) of ECEC by children who are identified as being disadvantaged compared to children who are not so identified?
2. Are there differences in ECEC utilisation in relation to specific types of disadvantage?
3. Is there a cumulative effect of disadvantage on ECEC utilisation?

Method

This paper uses data from the Birth Cohort of the LSAC at Wave 3. The LSAC B cohort comprises a nationally representative sample of approximately 5000 babies recruited in 2004 from Australian residential households (Soloff, Lawrence & Johnstone, 2005). The study employed a two-stage clustered sampling design, stratified by state and clustered by postcode within each stratum. The sample is broadly representative of all Australian children (as compared with the 2001 Census data). At Wave 3, children in the B cohort were aged between four and five years, a time when children are most likely to be attending some form of ECEC.

Participants

Participants were selected from the 4386 children in the Birth Cohort who participated at Wave 3. For the current study, 3615 children were selected from this larger sample based upon their main education arrangement at 4–5 years of age. The selected children had not yet started their first year of formal schooling, and were either attending an ECEC program in a child-care centre or preschool, or were receiving parental care. Of these, 1907 (52.8 %) were male and 1708 (47.2 %) were female. The children ranged in age from 49 months to 69 months; the mean age was 56.9 months (SD = 2.54). The LSAC sample included a diverse range of families; for example, 10.2 per cent (n = 368) were aged 24 years or under when the study child was born; and 29.7 per cent (n = 1075) had not completed Year 12 or equivalent.

Utilisation of ECEC programs

Parents reported on the main early childhood education program their child attended each week (preschool or childcare centre) and the number of hours attended each week. For the sample as a whole: 2262 children (62.6 %) were attending a preschool; 1121 (31 %) were attending a child-care centre; and 232 (6.4 %) were not utilising ECEC programs. The latter were described as receiving exclusive parental care. For the children attending ECEC, hours attended ranged from two to 50 per week, Mean = 16.15, SD = 8.25.

Disadvantage indicators

Nine child and family Disadvantage Indicators were developed based on the LSAC data set. Disadvantage Indicators (DIs) were derived from items collected via the Parent 1 Questionnaire and face-to-face interviews conducted in the families’ home in 2008, at Wave 3, when the children were four–five years of age. The vast majority, 98 per cent (n = 3542) of respondents were the child’s mother.

Child-level DI:

DI1: Child has disability or special health-care need was measured by combining two variables. A single item asking respondents whether the study child has a disability restricting activities lasting six months or more was used; and a two-item special health-care needs screener, originally constructed by Bethell et al. (2002) and adapted for LSAC. To be identified as having a special health-care need, a parent identified that their child had a condition that has lasted, or is expected to last, 12 months which causes medication use, and/or more medical care, mental health, or educational services than a child of the same age usually needs. Children who were either identified by their parent as having a disability that restricts everyday activities and/or identified as having a special health-care need, were coded as 1 on this DI, and those who did not were coded as 0.
DI2: Child is from language background other than English was determined by an item asking the main language spoken at home. This variable was then dichotomised, with 1 indicating the child spoke a language other than English in the home, and 0 indicating the child spoke English as their main home language.

DI3: Child is Aboriginal and/or Torres Strait Islander was determined through an item asking if the child is of Aboriginal or Torres Strait Islander origin. This variable was dichotomised, with a value of 1 indicating the child was of Aboriginal and/or Torres Strait Islander origin and a value of 0, indicating they were not.

Family-Level DI

DI4: Family in lowest quintile socioeconomic position (SEP) is a measure derived from maternal and paternal education, household income, and occupational prestige. As a composite scale, the SEP variable provides a more robust measure of socioeconomic status than income, occupation, or educational attainment level alone (Blakemore et al., 2009). For these analyses, SEP scores were grouped as quintiles and then dichotomised, with a code of 1 indicating the child was from the lowest 20 per cent and a value of 0 indicating the child was from the top 80 per cent of the SEP range.

DI5 Maternal and DI6 Paternal long-term health condition was assessed via parents’ response to a question in the face-to-face interview asking them whether they had a long-term condition or disability lasting for six months or more. Both maternal and paternal measures were included separately for these analyses. Children whose mother identified as having such a condition were coded as 1 on this DI, and those who did not were coded as 0. Children whose father identified as having such a condition were coded 1 on this DI, and those who did not were coded as 0.

DI7 Maternal and DI8 Paternal mental ill-health was determined by two variables: a question that asked parents to identify if they had a mental health condition requiring help or supervision, and the Kessler 6 (K6) scale (Furukawa, Kessler, Slade & Andrews, 2003). The single-item measure was coded as a 1 or a 0, with a score of 1 identifying the mother/father as having a mental health condition. The K6 is a widely used and validated measure of psychological distress, represented by six items in the LSAC data set (e.g. whether the participant felt nervous, felt hopeless and/or felt worthless). The six items of the scale generated a possible score ranging from 0–24 (the higher the score the higher the likelihood of mental disorder). Parents who scored between 13 and 24 on the K6 were identified as being very likely to have a mental disorder (Furukawa et al., 2003) and were coded as 1 for this study. All other participants were coded as 0. Children of mothers who identified on either or both of these measures received a score of 1 on this DI. Similarly, children of fathers who identified on either or both of the measures received a score of 1 on this DI.

DI9: Parental problematic drug and alcohol use is a LSAC-derived variable based on two questions related to alcohol usage and a single-item question related to the access of alcohol- and drug-related services in the past 12 months. Problematic alcohol use was derived from parental reported daily alcohol consumption and binge drinking frequency. For the maternal parent, drinking more than two drinks per day, and for the paternal parent, drinking more than four drinks a day were defined as problematic. Frequent binge drinking was defined as drinking more than seven drinks in a sitting for men and more than five drinks for women, more than twice a month. Further, children who lived in a household where a drug and/or alcohol service was accessed in the past year were also identified. Children who had either or both parent(s) with an alcohol abuse problem and/or children who lived in a household where a drug and/or alcohol service was used in the past year were coded as 1 on this DI, and those who did not were coded as 0.

Development of the Disadvantage Index

A cumulative risk index was computed based on a summed score representing the total number of DIs experienced by children at four--five years of age. To construct the Disadvantage Index the binary variables created for each of the nine DIs (0 reflecting an absence of the DI and a score of 1 reflecting the presence of the DI) were summed to give a possible range of 0–9. Scores for the LSAC sample ranged from 0, meaning no DI, to 4, meaning a child had total of 4 DIs. The potential for overlap among the nine DIs was explored using Pearson’s correlation analyses and the sample of 3615 children. Table 1 shows that a number of DIs were weakly correlated with other DIs. Aboriginal and Torres Strait Islander background was positively correlated with low SEP ($r = 0.129$) and maternal mental health problem was positively correlated with maternal long-term health condition ($r = 0.127$). Language background other than English was negatively correlated with parental problematic drug and alcohol use ($r = -0.110$). Eleven other significant correlations were identified, but all were extremely small (less than 0.10) suggesting that in general the nine DIs were independent measures of disadvantage and therefore could be combined to form a Disadvantage Index.

Analytical techniques

Statistical comparisons

Children’s utilisation of ECEC was examined for each DI and tested for significant differences using chi-square tests. Analysis of Variance (ANOVA) tests were used to test whether the hours children attended an ECEC program differed by each DI. Further, ANOVA was employed to examine the relationship between type of care used and the levels of the Disadvantage Index. Spearman’s correlations were used to examine the relationship between hours spent in non-parental care arrangements and levels on the Disadvantage Index. This
is a non-parametric test measuring the strength of a relationship between two variables (Field, 2009).

**Results**

**Identification of disadvantage**

Results for the nine DIs for the LSAC study sample are presented in Table 2.

**Utilisation of ECEC programs by disadvantaged children**

Initial analyses examined the type of ECEC used and hours attended for each of the nine DIs. Significant results were identified for six DIs.

*DI1: Child has a disability or special health-care need.*

Children who were identified as having a disability or special health-care need were somewhat less likely to be in exclusive parental care (4.7%) compared to their peers.
more likely to be in long day care centres (35.1%) compared to their peers (30.3%); and less likely to be attending preschool (60.1%) than their peers (63.0%); \( \chi^2 (2, 3615) = 7.166, p < 0.05. \)

Table 2. Number and proportion of children identified on each DI

<table>
<thead>
<tr>
<th>Child-level variables</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>DI1: Child has a disability or special health-care need</td>
<td>552</td>
<td>15.3</td>
</tr>
<tr>
<td>DI2: Child is from language background other than English</td>
<td>327</td>
<td>9.0</td>
</tr>
<tr>
<td>DI3: Child is Aboriginal and/or Torres Strait Islander</td>
<td>124</td>
<td>3.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Family-level variables</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>DI4: Low Socio-economic position</td>
<td>689</td>
<td>19.1</td>
</tr>
<tr>
<td>DI5: Maternal long-term health condition</td>
<td>130</td>
<td>13.6</td>
</tr>
<tr>
<td>DI6: Paternal long-term health condition</td>
<td>117</td>
<td>3.2</td>
</tr>
<tr>
<td>DI7: Maternal mental ill-health</td>
<td>104</td>
<td>2.9</td>
</tr>
<tr>
<td>DI8: Paternal mental ill-health</td>
<td>52</td>
<td>1.4</td>
</tr>
<tr>
<td>DI9: Parental problematic drug and alcohol use</td>
<td>828</td>
<td>22.9</td>
</tr>
</tbody>
</table>

DI2: *Child is from a language background other than English.* There was a significant association between language background other than English and type of early childhood care utilised, \( \chi^2 (2) = 16.391, p < 0.001. \) Children who were from a language background other than English were more likely to be in exclusive parental care (10.7%) compared to their peers (6.0%); more likely to be attending a childcare centre (35.2%) than their English background peers (30.6%); and less likely to be in preschool care (54.1%) compared to their peers (63.4%).

DI3: *Child is Aboriginal and/or Torres Strait Islander.* Children who were identified as being of Aboriginal and/or Torres Strait Islander status in this data set were more likely to be in inclusive parental care (10.7%) compared to their peers (6.0%); more likely to be attending a childcare centre (35.2%) than their English background peers (30.6%); and less likely to be in preschool care (54.1%) compared to their peers (63.4%).

DI4: *Family in lowest quintile SEP.* Children who were in the lowest quintile for SEP (lowest 20%) were more likely to be in exclusive parental care (13.2%) than their peers (4.8%); somewhat less likely to be attending a childcare centre (29.6%) than their peers (31.3%); and less likely to be attending preschool (57.2%) than their peers (63.8%); \( \chi^2 (2, 3615) = 66.639, p < .001. \) Furthermore, there was a significant effect of SEP on the hours of child care utilised, \( F(1, 3381) = 18.491, p < .001. \) Specifically, children in the lowest 20% used fewer hours per week (\( M = 14.84; SD = 7.85 \)) than children with a higher SEP (\( M = 16.43 \)) (\( SD = 8.31 \)).

DI5: *Maternal mental ill-health.* There was a significant association between maternal mental ill-health and type of early childhood care utilised, \( \chi^2 (2, 3615) = 6.282, p = .043. \) Children who had mothers with a mental health condition/disorder were more likely to be in parental care (10.6%) than their peers (6.3%), more likely to be in day care (37.5%) than their peers (30.8%) and less likely to be in preschool (51.9%) than their peers (62.9%).

DI9: *Parental problematic drug/alcohol use.* There was a significant association between parental problematic drug/alcohol use and type of early childhood care utilised, \( \chi^2 (2, 3615) = 6.096, p = .047. \) Specifically, children who had parents with problematic drug/alcohol use were less likely to be in a day care centre (27.8%) than their peers (32%) but more likely to be in a preschool setting (66.2%) than their peers (61.5%).

**Cumulative risk index for disadvantage (Disadvantage Index)**

The Disadvantage Index was the summed composite of the nine DI, 43.3% (1,566) of children had no DI (0); 38% (1,372) had one DI (1); 14.3% (517) had two (2); 3.4% (123) had three (3); and 1.0% (37) had four (4).

**Types of care by Disadvantage Index**

The utilisation of ECEC for each of the five points on the Disadvantage Index is illustrated in Figure 1. The pattern of the graph shows that as cumulative disadvantage increased, particularly for children experiencing three or more DIs, the use of preschool dropped and exclusive parental care increased. In contrast, there was little change in the utilisation of day care as level of disadvantage increased.

Analysis of variance testing also showed a relationship between scores on the Disadvantage Index and ECEC utilisation, \( F(2, 3612) = 20.819, p < .001. \) Post hoc comparisons using the Tukey test indicated that the mean score for the parental group (\( M = 1.16; SD = 1.09 \)) was significantly different than the mean scores from either the long day care group (\( M = 0.82; SD = 0.88 \)) or the preschool group (\( M = 0.84; SD = 0.84 \)). This suggests, then, that the higher the number of DIs, the more likely children are to be receiving exclusive parental care than their peers.
Hours of care
Hours spent in ECEC arrangements was weakly correlated with scores on the Disadvantage Index, \( r = -0.043, p < 0.05 \). The greater the number of DIs, the lower the number of hours spent in ECEC settings.

Discussion
The findings presented in this paper indicate that many Australian four–five-year-old children have one or more indicators of disadvantage (56.6% with at least one of nine DIs). Further, it is clear that the majority of children identified as being disadvantaged are utilising ECEC services. This finding suggests, in general, that ECEC is accessible for most children.

The findings also demonstrate, however, that those children who experience multiple indicators of disadvantage are more likely to be in exclusive parental care and less likely to attend an ECEC program, particularly a preschool. Similar to previous investigations of the LSAC data by Harrison et al. (2009) and Maguire and Hayes (2012), the current study showed that children with a language background other than English, children who identified with Aboriginal and Torres Strait Islander status, and children from families in a low socioeconomic position (SEP) had lower utilisation of preschool than their peers and were more likely to be in exclusive parental care. Differences were also noted for the amount of ECEC received per week. For the children who were attending preschool or a childcare centre, children from low SEP families used fewer hours of ECEC per week than other children, whereas Aboriginal and Torres Strait Islander children utilised longer hours of ECEC compared to their peers. The latter result is likely due to the greater use by Aboriginal/Torres Strait Islander children of childcare centres, which offer long hours of care, rather than preschools, which have restricted hours.

In contrast, the current study found that children with vulnerability due to a disability or special health-care need were well represented in ECEC programs. On average, they were less likely to be in exclusive parental care and more likely to be in long day care than their peers. This may be because attendance at ECEC heightens the likelihood of a disability or special health-care need being identified, but it may also be due to parental choice, or because children with disabilities often have limited childcare choices (Abbott et al., 2005).

The present study extended previous findings by examining the use of ECEC against a Disadvantage Index. These analyses demonstrated that the higher the number of indicators of disadvantage, the more likely the child was to be receiving exclusive parental care and the less likely to be attending an ECEC preschool program. Further, the findings suggest that the uptake of preschool was reduced as levels of disadvantage increased, whereas the use of long day care tended to be the same, regardless of disadvantage. Whether the utilisation of long day care by these children rather than preschool is because of parental choice or a result of availability, inclusion support, funding subsidies, or other incentives was not able to be determined in this study.

Limitations
We acknowledge that this study has a number of limitations. For instance, LSAC was not able to include...
children living in very remote parts of Australia and therefore we were not able to include a measure of environmental disadvantage/marginalisation. We were also unable to identify children from refugee backgrounds. Nevertheless, many of the sources of disadvantage identified by Young (1990) were able to be identified in the LSAC data set and included in our analyses.

Two further limitations of the data are acknowledged. LSAC is not representative of Australian Aboriginal and/or Torres Strait Islander children thus we cannot generalise to the population on this variable. Also, the data were collected in 2008, prior to or soon after the establishment of several government programs aimed to support the inclusion of disadvantaged children in ECEC, so the situation may have subsequently changed. Nevertheless, this study provides a useful examination of ECEC utilisation at one point of time. We also acknowledge that the Disadvantage Indicators are not of equal value. For example, we make no claims that having a low SEP indicates the same degree of disadvantage as having a person in the home with a disability. We do claim however, that the higher the number of indicators the greater the child’s level of disadvantage. Despite these caveats, we believe that the Disadvantage Index provides a useful tool for combining indicators of disadvantage.

Conclusions and implications

This study reveals that a significant percentage of children utilising ECEC have one or more indicators of disadvantage. Consequently, many ECEC services will be working with children and families facing challenging circumstances. It is children who have multiple indicators of disadvantage, and for whom high-quality ECEC is potentially the most beneficial, however, who are the most likely not to be using ECEC. It is important to note that the LSAC data set analysed in this paper does not allow for an in-depth understanding of the extent to which children’s reduced utilisation of preschool may be due to factors such as parental choice or the result of barriers to inclusion. We agree with Baxter and Hand (2013) that more research in this area using different methodology such as interviews with parents may be warranted in order to yield further information on the causes and barriers leading to non-utilisation on any kind of care in the year prior to school. The degree to which initiatives such as the National Partnership Agreement on early childhood education will make a difference to the utilisation of ECEC by disadvantaged children remains to be seen.

References


