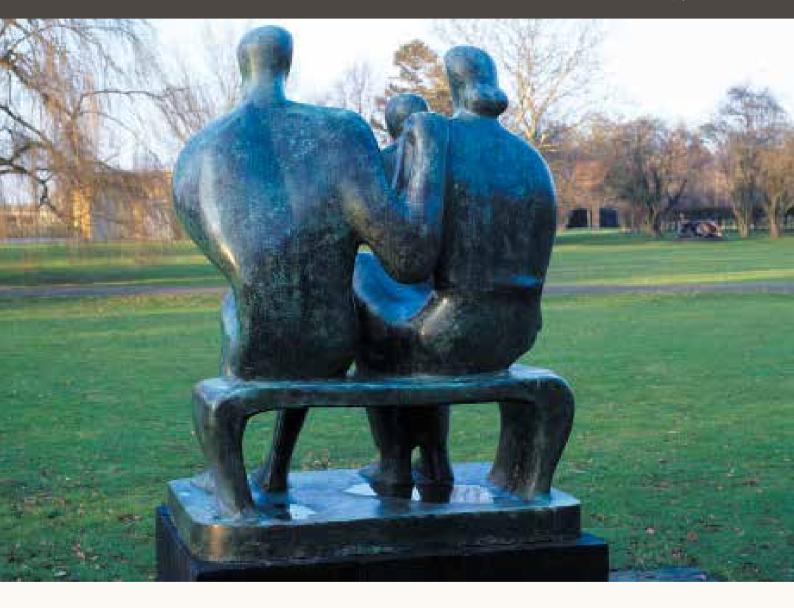
### WINTER ISSUE 2017/2018



www.ijbpe.com



# EARLY CHILDHOOD EDUCATION AND CARE:

A STRATEGY FOR REDUCING SOCIAL INEQUALITY



# Early Childhood Education and Care: A strategy for reducing social inequality

Janna van Belle RAND Europe

This article discusses the role that early education plays in 'breaking the cycle of disadvantage'; the role that social inequality plays in access to, and use of early education, and the ways in which attending early education in turn can help to reduce social inequality. Whilst the focus is on the situation in the UK, evidence and examples of policies and their impact from other countries are also cited. *Keywords: early education, social inequality* 

There is a strong link between the occupational background of parents and children's educational attainment, with children from lower, working class backgrounds performing worse at school than their middle class counterparts. With each step up the social ladder, mean levels of attainment rise (Ball, 2010; Shavit & Blossfeld, 1993). This link between socio-economic background and educational outcomes is particularly relevant in the UK, which, compared to other countries, has one of the highest levels of income inequality (OECD data from 2014). There is little direct evidence that explains what causes this link between socioeconomic status and educational outcomes, but access to early education has been put forward as one of the factors that mediates this relation.

#### SOCIAL INEQUALITY

Social inequality refers to the uneven distribution of resources such as education, care, income and labour market access within a society, along the lines of socially defined categories such as race, ethnicity, gender and class. In practice, social inequality is often equated with socio-economic inequality, and captured using indicators such as disposable household income level, education level of the mother, family status (whether the child lives with one parent or with both parents) and employment status of the mother. Income inequality has increased in most European Union (EU) countries over the past three decades, and, more importantly, the profile of those in the lowest income brackets has changed from elderly to young people and families with children (Organisation for Economic Cooperation & Development (OECD), 2017).

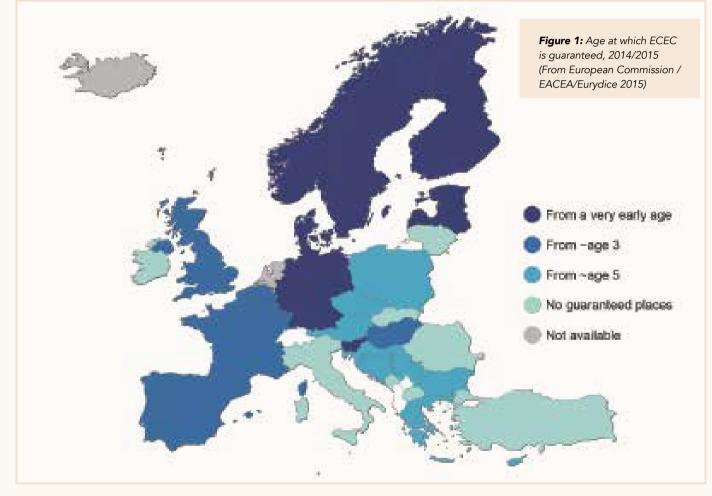
EARLY CHILDHOOD EDUCATION AND CARE (ECEC) Early Childhood Education and Care (ECEC) refers to any type (i.e. public, private or voluntary) of preschool childcare provision that is subject to a national regulatory framework. To understand the differences in outcomes of ECEC between children from different social backgrounds, it is important to understand differences among EU countries in how universal provision of ECEC is implemented. Some key differences are:

- How universal provision of ECEC is organised within countries. This affects availability of and access to ECEC.
- The extent to which ECEC is available and effective for all children who have a right to education. This relates to how inclusive ECEC is with regards to children from different backgrounds and with different abilities, and in the context of social equality primarily relates to efforts to increase equality in access by reducing the costs of ECEC to families.
- How ECEC provisions are set up within countries. This affects the quality of ECEC.

These factors necessarily interact with one another; for example, a country's policy on ECEC provision will affect the average age at which children receive ECEC, and similarly the effects of quality on child outcomes are mediated by the average number of vears that children receive ECEC.

#### UNIVERSAL PROVISION

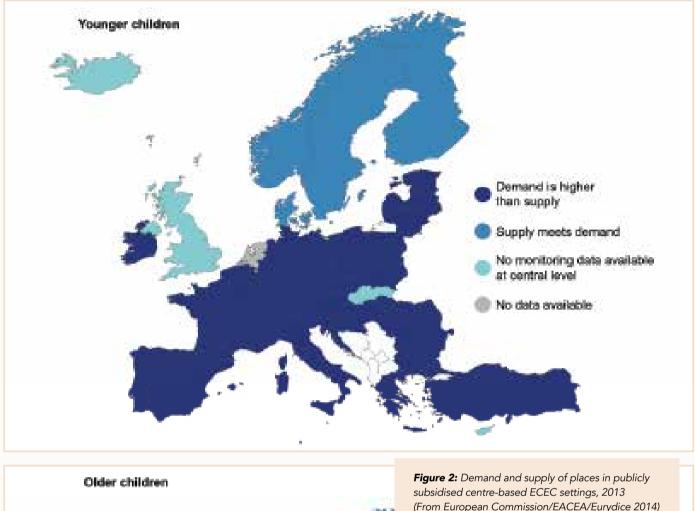
Universal provision can be ensured by compulsory attendance or legal entitlement. Compulsory ECEC refers to the obligation for children to attend ECEC settings when they reach a certain age. In the case of legal entitlement, public authorities guarantee a place for each child whose parents demand it, regardless of their employment, socioeconomic or family status; however, there is no obligation for the child to attend The age of legal entitlement affects both availability and access to ECEC places. As can be seen from Figure 2, the availability of places for children who are below the age of legal entitlement is lower than the demand in almost all countries. Not only are there less places available, the costs for families with children who are below the age of legal entitlement are higher than for those with older children because in most EU countries ECEC is free or subsidised from the age of legal entitlement. Because there are large differences among countries in the number of hours that are offered as part of the legal entitlement, ranging

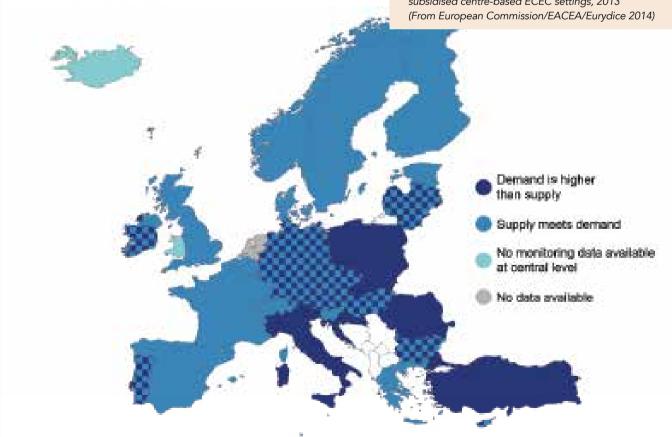


(European Commission/EACEA/Eurydice 2014). Differences among countries in availability and access to ECEC are linked to how universal provision of ECEC is organised. Differences arise through the following mechanisms:

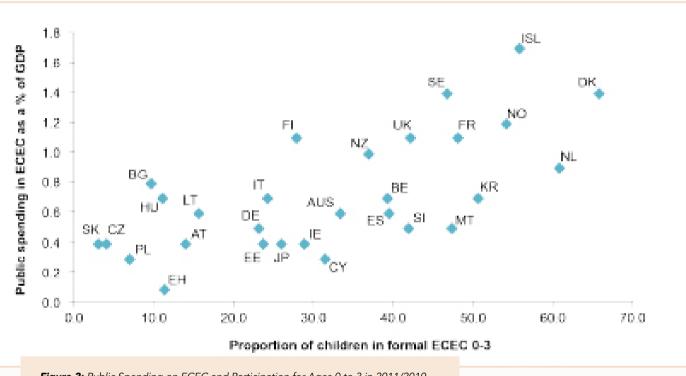
- The age at which a child can attend. As can be seen from Figure 1, the few countries that offer compulsory ECEC do so from a relatively late age, i.e. four years onwards. Countries that offer legal entitlement do so at different ages.
- The number of hours that are offered.
- How parents are compensated for the cost of ECEC provision attended by their child.

from 15–20 hours in Austria to 40 hours in Denmark, the number of hours (i.e the number of hours in excess of those offered under legal entitlement) directly influences the costs for families with children who have reached the age of legal entitlement. Combined, differences among countries in policies directed at ECEC availability result in large differences in the level of access to ECEC, primarily by affecting the cost of ECEC to families. These differences among countries in the affordability of ECEC depend primarily on the gap between sufficiently paid parental leave and legal entitlement age, and the number of hours under





either legal entitlement or compulsory attendance. In about two-thirds of the 28 EU Member States, there is a gap between adequately compensated childcare in the form of parental leave and legal entitlement to an ECEC place (European Commission /EACEA /Eurydice 2015). The other third of countries offer a legal entitlement to ECEC from a very early age (see also Janta, 2014). This results in large between-country differences in the financial burden that ECEC places on families. Across the OECD, ECEC costs 12 per cent of an average family's income, with the UK (27 per cent) and Switzerland (50 per cent) being the most expensive for families (Melhuish et al., 2015). For children who are below the age of legal entitlement, costs are highest in countries with a split-system (see the section on quality) and a large private sector, such as in Luxembourg, the UK, Cyprus and Malta, where 60–100 per cent of children below legal entitlement age attend private (unsubsidised) ECEC. As can be seen from Figure 3, there is a strong relationship between the amount of public spending on ECEC and participation.



**Figure 3:** Public Spending on ECEC and Participation for Ages 0 to 3 in 2011/2010 (Figure based on Akgündüz et al., 2015; data source OECD family database 2014)

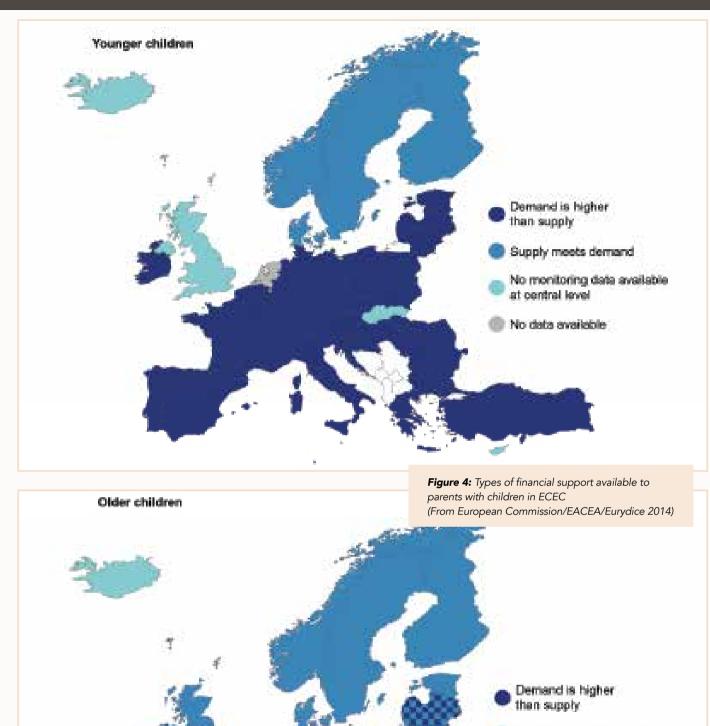
#### INCLUSIVITY

Inclusivity of ECEC is defined as the extent to which ECEC is available to all children, regardless of their socio-economic and ethnic background, and in this context primarily relates to efforts by EU countries to improve access by reducing the direct costs for ECEC attendance for children from lower socialeconomic background, who may not attend ECEC otherwise. Policies aimed at reducing these costs can either target families, or ECEC provisions.

Family policies include:

- Financial assistance made directly to households, for example through reduced taxes or exemptions
- Reductions in fees that may be charged by providers of ECEC
- Special family allowances to cover expenses related to ECEC

The differences among countries in affordability of ECEC are mediated by differences in how parents are compensated. As can be seen in Figure 4, tax relief is the most common form of financial support to help parents with ECEC costs, but there are large between-country differences in the qualifying criteria, which are often tied to the type of setting and a child's age. It is important to note that tax relief does not benefit those who earn below the tax limit, and thus does not benefit the very poor. Some countries offer a combination of tax relief and some other form of family specific support.





No monitoring data available at central level

No data available

Policies aimed at ECEC provisions include:

- Additional financial assistance and/or additional staffing for ECEC settings.
- Financial incentives for staff working with children at risk or in settings where the majority of children are from groups at risk.
- Allocated budgets from central government to local authorities, where allocation criteria takes regional demographic and socioeconomic factors into account (Eurydice & EACEA, 2009).

Recent data indicate that on average nearly 27 per cent of children living in EU member states are at risk of poverty or materially deprived; the proportions range from one in seven children in Sweden (14 percent), to every second child in Bulgaria and Romania (44 and 47 percent respectively)(Eurostat, 2015).

#### TYPE OF PROVISION

As will be discussed in the section on ECEC outcomes, the quality of ECEC is a key determinant of the outcomes. ECEC quality in turn is strongly affected by the type of provision. In most EU countries, ECEC is split in two different phases according to a child's age, and provision is delivered in separate systems for younger (from birth to three years of age) and older children with large differences among countries in the transition age, which varies between two and a half and four years old. Home-based and centrebased ECEC provisions exist in parallel in almost all EU countries (European Commission/EACEA/ Eurydice, 2014). In the majority of countries, the authorities that are responsible for governance, regulation and funding differ between different provision types. This leads to differences in certain structural indicators linked to ECEC quality.

These indicators include:

- The extent to which educational guidelines apply: In about one quarter of EU countries there are no common educational guidelines or curricula provided for settings for children up to the age of two. In addition, fewer than half of the countries where home-based provision exists use educational guidelines for this type of setting. For those countries that have educational guidelines, there are substantial between-country differences in the flexibility with which they are applied in ECEC settings, and the level at which responsibility is held for their execution (i.e. national, regional or local).
- Staff ratios: The maximum number of children per staff member within ECEC centres is most often prescribed by central regulations. Total group size is also sometimes dictated. Below three years, there are significant differences among countries, ranging from four children under the age of one per caregiver in the Netherlands, to eleven in Portugal. The maximum number of children allowed per adult often doubles when children reach three years of age (European Commission/EACEA/Eurydice, 2014).

 Staff qualifications: Lastly, staff qualification requirements similarly differ between the types of ECEC provision: in more than a third of EU countries, there must be at least one staff member who has tertiary level education in educational sciences for all groups of children across the entire phase of ECEC, whereas in another third of the countries, this requirement only holds for children aged three years and over. Additionally, working conditions have been shown to be an important factor in ensuring a high quality workforce, resulting in differences among countries where working conditions are not centrally regulated across ECEC provision types (OECD 2010).

As mentioned, these three factors do not stand alone. For example, the age at which legal entitlement is available and the associated costs affect the uptake of ECEC differently for children of different socioeconomic backgrounds. With the exception of Denmark, Sweden, Slovenia and Germany, childcare usage is related to household income, with the richest income groups of parents more often using formal childcare arrangements. In other words, children from more wealthy homes are more likely to attend pre-primary education, and those students who might benefit most – the socioeconomically disadvantaged – are less likely to attend and benefit from any quality improvements (Mills et al., 2014).

#### LINK BETWEEN SOCIAL INEQUALITY AND ECEC OUTCOMES

Although there is overwhelming evidence from both randomised controlled trials, quasi-experimental and longitudinal studies, conducted across many EU countries, that ECEC improves educational outcomes (OECD, 2011), these effects are mediated by betweencountry differences in the availability and quality of and level of access to ECEC. In addition, they depend upon family and child factors, such as family deprivation and child temperament. Most research in this field has focussed on how socioeconomic status mediates the effects of ECEC attendance, or in other words, the extent to which policies aimed at increasing access to ECEC improve educational outcomes of children in disadvantaged groups.

Results show that positive outcomes associated with attending ECEC generally reflect a combination of timing (or age of entry) and duration, which, as outlined previously, are related to how ECEC is organised within a country, as this in turn affects affordability. However, it is important to note that the positive effect of longer time spent in ECEC, is mediated by the type of ECEC provision and the quality: the evidence for a positive effect of an early starting age for children up to the age of three on ECEC outcomes is mixed, with results depending on the type of care (Luijk et al., 2015; Loeb et al., 2014; Bernal & Keane, 2011; Sylva et al., 2011; Hansen & Hawkes, 2009; Gregg et al., 2005; Love et al., 2003;), the quality of care (Anders et al., 2013; Melhuish, 2004) and the family background (Leak et al., 2010; Leseman, 2009).

These discrepant results reflect that overall, the effects of starting age on ECEC outcomes for children up to three years of age are moderated by family background, with negative, neutral and positive effects occurring depending on the relative balance of quality of care at home and in childcare. The best educational outcomes occurred for those children for whom the quality of childcare was higher than the quality of care at home.

Results from a study by Anders et al. (2013) suggest that specifically, good process quality of ECEC provision (i.e. quality of the curriculum, pedagogical practices and a safe socioemotional environment) is a predictor for the persistence of positive educational outcomes.

For children aged three years and older, there is consistent evidence for the positive effects of ECEC. This finding holds across EU countries, and across different ECEC provisions, as evidenced by an OECD PISA report from 2011, which found that students who had attended some pre-primary school outperformed students who had not, by about a year of achievement, although benefits are greater for high-quality provision (OECD, 2011). Interestingly, results from the UK in the EPPSE study found that full-time attendance led to no better gains for children compared to part-time provision (Taggart et al., 2015), suggesting that in terms of educational outcomes, having some access to ECEC provision during the preschool years is more important than the amount of provision.

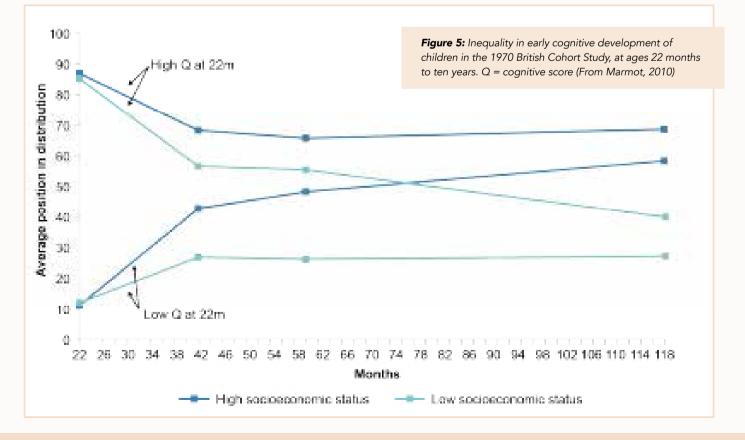
These findings on the long lasting and positive outcomes related to ECEC attendance are extra relevant when placed alongside the finding that children from disadvantaged backgrounds are disproportionally likely to miss out on ECEC: in some countries, for example France and Ireland, there are four times as many children from high-income families in ECEC then children from disadvantaged families (OECD 2016).

#### THE ROLE OF ECEC IN 'BREAKING THE CYCLE OF DISADVANTAGE'

The previous sections discussed how a family's socio-economic status can affect both the uptake of ECEC, and mediate the positive outcomes in terms of educational attainment associated with attending ECEC.

Lastly, the link between higher educational attainment and socioeconomic outcomes later in life will be discussed: if, and by what mechanism, does ECEC affect the 'cycle of disadvantage' whereby socioeconomic status is transferred from parent to child?

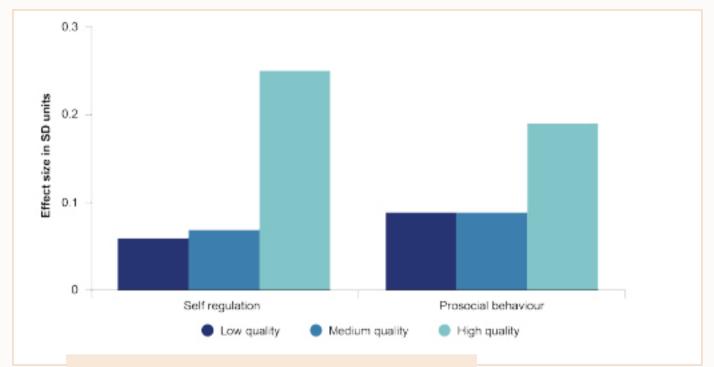
As discussed previously, one of the outcomes of increased access to ECEC, for example through tax benefits, is increased equality of participation. Equally, one of the most consistent and long-lasting effects of ECEC is that of increased socioeconomic equality (Esping-Andersen, 2005). Both European studies (Dumas & Arnaud, 2010; Bauer & Riphahn, 2009) and US studies show that children from disadvantaged backgrounds gain more from ECEC than children from advantaged backgrounds. One proposed mechanism is that ECEC provisions replace a suboptimal home situation in terms of educational opportunities, a view supported by findings from the UK Marmot review in 2010. Figure 5 shows how

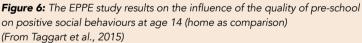


the long term development of cognitive scores is differentially affected by socioeconomic background. Specifically, it shows that children measured as having high cognitive scores at age 2 who were from families with low socioeconomic status scored lower on the same cognitive score at age 7 than children who scored as low at age two but who were from a family that had high socioeconomic status (Marmot, 2010). Although it is difficult to directly attribute this difference to either family or preschool factors, it does illustrate the potential effect of environment on cognitive development, and the relative strength of this effect in the preschool years.

In addition to cognitive factors, there are also non-cognitive factors which affect positive outcomes later in life, such as the abilities to work well and communicate effectively with others, solve problems creatively, and see tasks to completion. Studies from affect socioeconomic outcomes independently from the direct effects of education (Melhuish et al., 2015; Taggart et al., 2015) (see Figure 6).

Further down the line, reductions in socioeconomic inequality have the potential to act intergenerationally, by reducing the high correlation between parents' educational attainment and income and that of their children. The improved educational outcomes of children who attend ECEC, and their relative importance for children from a disadvantaged background, show how ECEC can improve educational mobility in terms of educational outcomes. Improved educational mobility in turn improves income mobility, which means that the typically high correlation between parents' income and their child's future income is reduced (Bauer & Riphahn, 2009). A study from Norway underlines this positive effect of access to ECEC on economic outcomes by showing that a large scale



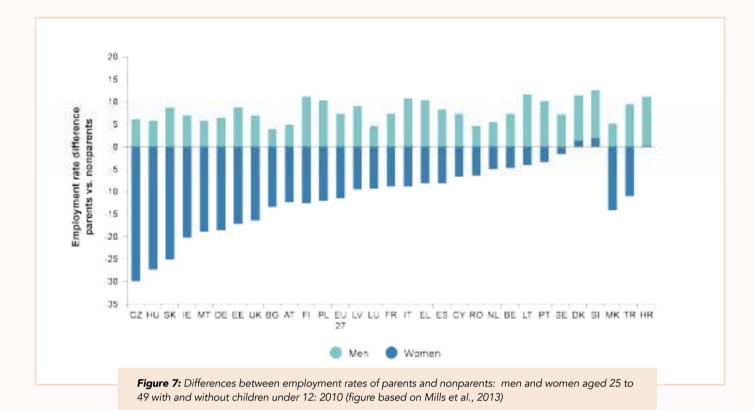


the US suggest that children from low socioeconomic background lag behind on skills such as self-control, social skills and approaches to learning, and that attending ECEC can improve school-readiness and reduce these inequalities. Results from the literature on successful early interventions, including the Perry Pre-school programme, show that the social skills and motivation of children are more easily altered than IQ. The increase in social skills has been associated with both the quality and the duration of ECEC attendance (Melhuish, 2013) and is long-lasting; the social and emotional skills acquired during ECEC attendance have been argued to affect performance in school and in the workplace, and thus arguably expansion of subsidised ECEC resulted in increased educational attainment and labour market participation and a concurrent reduction in welfare dependency – driven by the children whose parents have a lower level of education who benefited most from the reduction in ECEC cost (Havnes & Mogstad, 2011).

#### BROADER SOCIO-ECONOMIC OUTCOMES

Lastly, there are broader socioeconomic outcomes of ECEC, not related to children's outcomes. ECEC provision is found to positively influence female labour market participation. Labour market participation is directly linked to availability and affordability of ECEC, as it is widely recognised that when a certain level

#### EARLY CHILDHOOD EDUCATION AND CARE



of female participation in the formal labour market is reached (generally from 50 per cent upwards), private solutions to meeting childcare needs become insufficient. Parents or other family members are themselves working and informal child-minding solutions are unsatisfactory because of quality concerns, shortages and instability (The Business Roundtable 2003; Dy-Hammer et al., 2001). This link between labour market participation and ECEC availability and affordability is illustrated by the findings by Mills et al. (2013) that within Europe, the main reason for parents not to enter the workforce is the cost of childcare (53 per cent of parents), followed by the lack of childcare availability (25 per cent). Only four per cent mentioned the quality of childcare as a barrier to joining the workforce (Mills et al., 2014).

These studies illustrate one of the key arguments for investing in ECEC over investing in public education later in life, namely that early intervention at the ECEC age is more cost effective than remedying unequal outcomes later in life, as the effects of inequality accumulate over the lifespan (Heckman & Mosso, 2014; Currie, 2001). Wages for primary caregivers need to cover several costs. There are the opportunity costs of working, as working time can also be used to save money on the costs of childcare. For this reason, there is a larger proportion of women participating in the labour force in countries with a high level of public (affordable) childcare provision, which drives down this opportunity cost (NESF, 2005; Browning, 1992). This positive relation between labour market participation and ECEC availability and access is particularly strong in countries with a split ECEC provision system, and a high age of legal entitlement as this leads to high

costs for parents. This is reflected in the fact that in all EU countries except Denmark, Sweden, Slovenia and Germany, female labour market participation is tied to household income (Mills et al., 2014). This gender specific effect of ECEC affordability on labour force participation is illustrated by Figure 7, which shows the difference in employment rates between men and women with children under 12 in different EU countries.

It is important to note that the negative consequences of low availability or high costs of ECEC on female labour supply reach far beyond the direct consequences. High ECEC costs result also in reduced professional development opportunities and female skills utilisation, and in reduced re-employment rates because of time out of the labour market, and for the same reason underlie the gender pay gap (the pay gap between equally qualified males and females), and the family wage gap (the pay differential between women with children and childless women) (Harkness & Waldfogel, 2003; Voicu & Buddelmeyer, 2003).

#### CONCLUSION

The research presented in this paper highlights the complexity of the relation between ECEC attendance and socioeconomic outcomes. It shows that currently in most countries, including the UK (despite the recent extension of entitlement to free childcare for 3 and 4 year olds from 15 to 30 hours a week), access to ECEC is to a large degree determined by socioeconomic status due to the high costs of access. Although there is evidence that ECEC can reduce social inequality, this is for a large part dependent on the level of access to high quality provision by children from low socioeconomic background,

which in turn is related to national policies on parental leave and how ECEC is organised.

Despite this complexity, the research does support a number of 'best practices': interventions that, combined, can be expected to improve outcomes later in life for those who participate in ECEC:

- For children under three who are not disadvantaged in their home environment, any ECEC attendance, even part-time, is beneficial in terms of cognitive and social development – provided the ECEC provision is of high quality.
- For children under three who come from a disadvantaged background, both the duration of attendance and the quality of the provision is important, with longer attendance and good-quality ECEC yielding best results.
- Availability and access, in combination with country-specific cultural norms and parental

leave policies, are strongly related to ECEC participation. Lowering the age of guaranteed access, and providing sufficient financial support to bridge the gap between sufficiently paid parental leave and the age of guaranteed access, will contribute to higher participation.

#### ACKNOWLEDGEMENT

This paper is based on the policy brief, 'Early Childhood Education and Care (ECEC) and its long-term effects on educational and labour market outcomes' which was written for the European Commission as part of the European Platform for Investing in Children (EPIC) project.

More policy briefs and information are available at: http://ec.europa.eu/social/main. jsp?catld=1254&intPageId=3689&langId=en

#### REFERENCES

Akgündüz, Y.E., Ünver, O., Plantenga, J. & Nicaise, I. 2015. CARE Curriculum Quality Analysis and Impact Review of European D5 . 1 : The Socio - Economic Dimension of Early Childhood Education and Care in Europe. Utrecht University.

Ball, S.J. 2010. New Class Inequalities in Education: Why Education Policy May Be Looking in the Wrong Place! Education Policy, Civil Society and Social Class. International Journal of Sociology and Social Policy 30 (3/4): 155–66. doi:10.1108/01443331011033346.

European Commission/EACEA/Eurydice. 2014. Key Data on Early Childhood Education and Care in Europe. 2014 Edition. Eurydice and Eurostat Report. Luxembourg: Publications Office of the European Union. doi:10.2797/75270. European Commission /EACEA /Eurydice. 2015. Structural Indicators for Monitoring Education and Training Systems in Europe 2015. Eurydice Background Report to the Education and Training Monitor 2015. Available at: http://eacea. ec.europa.eu/education/eurydice/documents/thematic\_reports/190EN.pdf.

Eurostat. 2015. People at Risk of Poverty or Social Exclusion. Available at: http://ec.europa.eu/eurostat/statistics-explained/index.php/People\_at\_risk\_of\_poverty\_or\_social\_exclusion.

Eurydice and EACEA. 2009. Tackling Social and Cultural Inequalities through Early Childhood Education and Care in Europe. doi:10.2797/18055.

Janta, B. 2014. Caring for Children in Europe. Available at: https://www.rand.org/pubs/research\_reports/RR554.html. Marmot, M. 2010. Fair Society , Healthy Lives: Strategic Review of Health Inequalities in England Post-2010. Available at: http://www.parliament.uk/documents/fair-society-healthy-lives-full-report.pdf.

Melhuish, E., Ereky-Stevens, K.,K., Ariescu, A., Penderi, E., Rentzou, A. et al. 2015. CARE Curriculum Quality Analysis and Impact Review of European Early Childhood Education and Care (ECEC) D4 .1: A Review of Research on the Effects of Early Childhood Education and Care (ECEC) upon Child Development. Available at: http://ecec-care.org/fileadmin/careproject/Publications/reports/new\_version\_CARE\_WP4\_D4\_1\_Review\_on\_the\_effects\_of\_ECEC.pdf. Mills, M., Präg, P., Tsang, F., Begall, K., Derbyshire, J. et al. 2013. Use of Childcare Services in the EU Member States and Progress towards the Barcelona Targets. Short Statistical Report No. 1. Prepared for the European Commission Directorate-General for Justice. Unpublished Manuscript.

Mills, M., Präg, P., Tsang, F., Begall, K., Derbyshire, J. et al. 2014. Use of Childcare Services in the EU Member States and Progress towards the Barcelona Targets. RAND Europe. Available at: http://ec.europa.eu/justice/gender-equality/files/documents/140502\_gender\_equality\_workforce\_ssr1\_en.pdf.

OECD. 2010. Encouraging Quality in Early Childhood Education and Care. Research Brief:

Working Conditions Matter. OECD Publishing.

OECD. 2011. Investing in High-Quality Early Childhood Education and Care. OECD Publishing.

OECD. 2016. Who Uses Childcare? Background brief on inequalities in the use of formal early childhood education and care (ECEC) in very young children, June. OECD Publishing.

OECD. 2017. Understanding the Socio-Economic Divide in Europe, January. OECD Publishing.

Shavit, Y., and Blossfeld, H-P. 1993. Persistent Inequality: Changing Educational Attainment in Thirteen Countries. Westview Press. Available at: https://eric.ed.gov/?id=ED366667.

Taggart, B., Sylva, K., Melhuish., E., Sammons, P. 2015. Effective Pre-School, Primary and Secondary Education Project (EPPSE 3-16+). Institute of Education, University of London.



# THE IJBPE SUPPLEMENTS ARCHIVE

Parent Education Today: Walking the Walk Practice Pointers from the 2016 International Journal of Birth and Parent Education Conference Workshop

### WITH THE ASSOCIATION FOR INFANT MENTAL HEALTH

Best Practice Guidance No 1: Improving Relationships in the Perinatal Period: What Works?
 Best Practice Guidance No 2: Improving Attachment in Babies: What Works?
 Best Practice Guidance No 3: Antenatal Anxiety and Depression: What Should We Be Doing?
 Best Practice Guidance No 4: The Relationship with the Unborn Baby: Why it Matters

## NEXT SUPPLEMENT

Best Practice Guidance No 5: Infant Sleep Interventions: What Works

## **FUTURE ISSUES OF THE IJBPE**

**Spring 2018:** Focus on Education and Support for Better Birthing **Summer 2018:** Focus on Education and Support for Families in Danger – Lessons from Military Families

# SUBSCRIPTIONS

UK Individual:	4 issues (hard copy) plus one year's online access: ${ m f36}$
UK Student:	4 issues (hard copy) plus one year's online access: ${ m f28}$
EU Individual:	4 issues (hard copy) plus one year's online access: £42
RoW Individual:	4 issues (hard copy) by airmail plus one year log-in: $\pm 50$
Online Subscription: 1 year: £20	

#### Library/Further and Higher Education Insitutes:

Prices from £180 - £500 dependent on size of institution. Individual subscription available via the IJBPE website, and institutional via EBSCO or other Information Delivery Services SUBSCRIBE NOW! FOR AS LITTLE AS £20 PER YEAR

visit ijbpe.com/index.php/journals/subscribe-to-ijbpe