## 8

# Child Care, Education and Equal Opportunity

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ABSTRACT The child's right to an education should, according to the UN Convention on the Rights of the Child, enable the child to develop abilities on the basis of 'equal opportunity'. Moreover, States are already required to provide, at least, childcare for working parents (Article 18). This article presents empirical evidence on the importance of child care for child development, and goes on to discuss whether Norway succeeds in promoting a well-designed child care policy. The author explores how children from various socioeconomic backgrounds are affected by enrolment in child care, and further discusses how the child care center can work to fulfill the child's right to develop abilities on a basis of equal opportunity.

**KEYWORDS** child care | early learning | child development | equal opportunity | children's rights

#### 8.1 INTRODUCTION

The child's right to an education should, according to the Convention on the Rights of the Child (CRC), enable the child to develop abilities on the basis of 'equal opportunity' (Article 29). Research in the field of neuroscience and psychology suggests that the first years of life are critical in shaping cognitive, social and language skills (Shonkoff and Phillips 2000). Thus, children's learning, or lack thereof, during early years, may determine their future academic success. States are already required to provide childcare for working parents (Article 18, CRC) but the Committee on the Rights of the Child has also increasingly recognized that the right to education is dependent on access to quality childcare.

Children from disadvantaged families face compromised environments and parenting that fail to support learning and child exploration. For example, already at age three, the language development of children of highly educated parents is substantially better than that of children of low-educated parents (Kalil 2014, Schølberg et al. 2008). Such early inequality can persist or widen through school years and later life. Indeed, recent data from the PISA study show that socioeconomic inequalities in education are of a similar magnitude in the generous welfare state of Norway as in the USA, and socioeconomic inequalities in education seem to have risen over the last decades (Kalil 2014).

On this background, it appears crucial to promote a solid foundation for child development early on to enable all children to develop abilities on a basis of equal opportunity. Several recent studies show that enrolment in institutional child care at an early age enhances early learning and promotes child development, particularly among children from disadvantaged families (Drange and Havnes 2019, Havnes and Mogstad 2011, Almond and Currie 2011). Hence evidence goes a long way in suggesting that participating in child care can help level the differences that arise from children growing up in different home environments.

If we want to assess whether Norway succeeds in promoting equality of opportunity, keeping in mind the important role of early learning, we must take a close look at policies governing early child development. While education in Norway is compulsory and free from age 6 to age 16, centre-based child care is not mandatory prior to in school at age 6. However, the government ensures that all children have a right to enrol in publicly certified child care. But while this right applies to some children from their first birthday, others will have to wait until they turn nearly two before they have the same right. Furthermore, child care is heavily subsidized, but may still be costly for a low-income family. Indeed, despite the extensive availability of child care, there is a large discrepancy in enrolment rates in Norway depending on immigrant status, family income and parental education. In 2014, about 85% of 1- and 2-year-old children with a native background were enrolled in child care, whereas the corresponding share of children from immigrant families was about 55%. A similar, if slightly less pronounced pattern, is also evident for other background characteristics such as parental education and family income (Drange and Telle 2018). Given that the first years are crucial for the formation of both social and cognitive skills, it is a challenge that many children who likely would benefit are not, in fact, enrolled.

This chapter aims to discuss whether Norway succeeds in promoting a well-designed child care policy that enhances early child development. Given the documented success of formal child care in enhancing such early development, the

focus will be on the importance and implementation of child care policies. I will carefully review the literature on child care, both for short- and long-term child development. I will further address the current state when it comes to policy implementation in the child care sector in Norway, such as the child care enrolment guarantee and regulations that apply to the child care center. I will also discuss the Cash-for-Care subsidy, as receiving this subsidy depends on the child not enrolling in child care. Next, I proceed to investigate whether the current policies are successful in securing enrolment of children in child care in Norway. I pay close attention to differences across children from various socioeconomic backgrounds. This latter part will focus on child care in Oslo as the data needed to do the analysis is only available for the capital. It turns out that there is a lower enrolment rate among children from disadvantaged families, and this pattern is particularly clear for children from immigrant families. To expand the understanding of how the child care center may be successful in promoting early child development, I also look at how the composition of children vary across centers and areas in Oslo. Lastly, I proceed to discuss the implications of these findings for the ability of the child care center to enhance social mobility and fulfill the child's right to develop abilities on a basis of equal opportunity.

#### 8.2 CHILD CARE, CHILD DEVELOPMENT, AND CHILD RIGHTS

In 2002, the European Union's Presidency formulated a policy goal 'to provide child care by 2010 to at least 90% of children between 3 years old and the mandatory school age and at least 33% of children under 3 years of age' (EU, 2002, p. 13), and in his State of the Union address in February 2013 President Obama called for making 'high-quality preschool available to every single child in America'. In Norway, a number of governmentally appointed committees and white papers list the benefits of providing high-quality and universal child care. <sup>1</sup>

A key problem with many studies of how child care affects children, is that child care supply, child care enrolment and family characteristics are related in unobserved ways. For instance, if we compare children that enrol in child care with children that do not, we will probably find that children in child care do better, simply because parents with higher income and education are more likely to send their child to child care (Drange, Havnes and Sandsør 2016). Differences

E.g., Offentlige overføringer til barnefamilier, St.meld. nr. 43 2000–2001; Tidlig innsats for livslang læring, St.meld. nr. 16 2006–2007; Med barnet i fokus, NOU 2008:9; Fordelingsutvalgets rapport, NOU 2009: 10; Kvalitet i barnehagen, St.meld. nr. 41 2008–2009; NOU 2010:8 Med forskertrang og lekelyst.

between parents such as income and education can be observed, and we can take them into account when we compare the development of children enrolled and not enrolled. However, other differences may be unobserved. For instance, imagine that parents with a strong desire for their child to achieve higher education are more likely to send their child to child care than parents without such a desire. At the same time, these parents may also be more likely to read to their child, and in general to engage their child in activities that enhances child development. If this is the case, and we compare these children, we may find that the child in child care starts school more prepared than the child that has not been enrolled in child care. However, we cannot know whether the difference between the two children exists because of the child care experience or because the parents who sent their child to child care at the same time offered a home environment that to a greater degree encouraged early development. If we undertook this simple comparison, we would overestimate the importance of child care because other, unobservable factors were correlated with enrolment. In order to properly understand whether child care is beneficial for children, it is important that we rely on studies that take into account such unobserved factors.

Several recent studies that take unobserved factors into account, suggest that investment in early childhood is promising and important to improve intergenerational mobility (Almond and Currie 2011). Non-enrolment in preschool programs may, for example, delay the children's language development, especially when the parents' proficiency in the language spoken by the majority is poor (Bleakley and Chin 2008). Moreover, a number of studies that investigate effects of child care on subsequent outcomes of children find particularly beneficial effects for children from disadvantaged families (Havnes and Mogstad 2011; Cornelissen et al. 2018).

There are several well-designed Norwegian studies exploring how child care affects child development. Havnes and Mogstad (2011) study long-term results of a reform that expanded the availability of child care for 3–6-year-olds in the 1970s. Their study is based on the introduction of a law passed in 1975 which laid the responsibility for child care centers to the municipalities. This caused a large increase in child care availability with significant variation between different municipalities. The authors take advantage of this variation and compare outcomes of children residing in municipalities with a large expansion and children residing in municipalities that expanded little, before and after the law was passed. The authors find a strong, positive impact on children's later educational attainment and participation in the labor market. Some effects of increased child care availability are heterogeneous. The likelihood of earning a high income later in

life is, for instance, mainly linked to girls' improved performance. Findings from this study underline how child care may enhance social mobility and hence promote equality of opportunity.

A study by Drange and Telle from 2017 explores the introduction of free child care for five-year-olds in two city districts in Oslo (Gamle Oslo and Grünerløkka) in 1998. We find that access to free child care has a positive impact on the school performance of children from immigrant families at the end of primary school. While girls perform better, boys' results are unchanged.

Studies from other countries tend to discover similar findings. A study from Germany examines a more recent expansion of child care (Cornelissen et al. 2016). The German child care centre is similar to the Norwegian in that it is subsidized, follows consistent national policy in terms of quality, and has a focus on learning through play. The authors look at tests in both cognitive and non-cognitive skills done before children start school. The study concludes that children who would benefit most from attending child care, are the children that are less likely to be enrolled.

While we know quite a lot about how child care impacts older children (3–5-year olds), few studies have focused on the impact for the youngest. There are, however, some recent exemptions, such as a study from Oslo taking advantage of a lottery that randomly allocated child care to young applicants aged 1–2 years (Drange and Havnes 2019). The random assignment allows for a comparison of children that enrolled in child care at different times due to the outcome of the lottery. It turns out that children who started earlier in child care due to winning the lottery, perform better on language and mathematics tests in first grade. The results are particularly strong for children from disadvantaged families, again suggesting that starting early is important for social mobility.

A potential shortcoming of this study is that it only considers cognitive development. Non-cognitive skills have also been shown to be very important. Reassuringly, several articles from the psychology literature have recently looked at potential effects on non-cognitive skills such as aggression, using Norwegian data. When handling selection bias with an instrumental variable approach, Dearing et al. (2015) find that aggression levels at age four appeared very similar for children enrolled in child care prior to age 1 and those who had entered much later.

These findings in the research literature track an evolving understanding of the obligations of States in the Convention on the Rights of the Child. The Convention is already crystal clear that States must ensure child care is available and accessible for working parents: 'States parties shall take all appropriate measures to ensure that children of working parents have the right to benefit from child care services

and facilities for which they are eligible'. Moreover, Article 18(2) indicates that child care is part of a broader platform of support to parents. State parties must assist parents and guardians in 'child-rearing' through the 'development of institutions, facilities and services for the care of children'. States are regularly reminded of these obligations by the Committee on the Rights of the Child, including in its General Comment No. 7 on Early Childhood (paras. 15 and 21, 30).

However, the child rights community has increasingly recognized the link between education and equal opportunity. As Carol Bellamy, UNICEF's previous Executive Director, stated, 'There is a growing consensus that child care and early childhood education are inseparable' (UNICEF, 2001: 71). The Committee on the Rights of the Child has equally emphasized importance of making available high-quality childcare, even noting that it must include human rights education.<sup>3</sup> This evidence-based shift is most apparent in its General Commment No. 7. The Committee states:

Research evidence demonstrates the potential for quality education programmes to have a positive impact on young children's successful transition to primary school, their *educational progress* and their long-term social adjustment. Many countries and regions now provide comprehensive early education starting at 4 years old, which in some countries is integrated with childcare for working parents. Acknowledging that traditional divisions between 'care' and 'education' services have not always been in children's best interests, the concept of 'Educare' is sometimes used to signal a shift towards integrated services, and reinforces the recognition of the need for a coordinated, holistic, multisectoral approach to early childhood."

Moreover, in its concluding observations, the Committee has placed importance on decreasing inequality of income through measures which are holistic and evidenced-based. <sup>5</sup>

<sup>2.</sup> Emphasis added.

General Comment No. 7, Implementing Child Rights in Early Childhood, 20 September, UN doc. CRC/C/GC/7/Rev.1 (2005), para. 33. See also the Committee's Concluding Observations on Nigeria, UN doc. CRC/C/15/Add.257, paras. 40 and 41.

<sup>4.</sup> Ibid. para. 30. Emphasis added.

<sup>5.</sup> The Committee urges the State party to intensify its efforts to address and eradicate poverty and inequality, especially of children, and: '(a) To consider systematic reform of current policies and programmes to effectively address child poverty in a sustainable manner, using a multidisciplinary approach that considers social, cultural, and geographic determinants of poverty reduction'. Concluding Observations on Italy, UN doc. CRC/C/ITA/CO/3-4, 31 (2011).

#### **8.3 CURRENT CHILD CARE POLICIES**

Due to a political settlement in Norway in 2003 (*Barnehageforliket*), child care has been massively expanded in recent years. Enrolment rates for the youngest children have doubled, from about 40% in 2002 to about 80% in 2015 (Statistikkbanken). Children are entitled to a child care place from August of the year they turn 1, if they are born prior to November 1<sup>st</sup>. The current legislation implies that a child born in November has to wait until 21–22 months before having the right to a slot, whereas a child born in August will have the right to a place at 12 months. That the birthdate of a child determines such an important right, may be perceived as unfair for the individual family. On a more general basis and given that recent research shows a positive effect on cognitive development from attending child care early, it is unfortunate that the right to a place is based on discrimination by age. If such age discrimination postpones child care start for children born late and early in the year, it might lead to larger gaps in development by socioeconomic background for these children.

Child care centers in Norway should meet strict regulations, with provisions on staff qualifications, number of children per teacher, size of play area, and educational orientation. Each center should be run by a head teacher (typically an educated pre-school teacher) who manages the center and is responsible for planning, observation, collaboration and evaluation of all activities. In terms of educational content, a social pedagogy tradition has dominated childcare practices in Norway since its inception in the 1970s. According to this tradition, children should develop social, language and physical skills mainly through play and informal learning. The social pedagogy tradition to early education has been especially influential in the Nordic countries and Central-Europe. In contrast, a so-called preprimary pedagogic approach to early education has dominated many English and French-speaking countries, favoring formal learning processes to meet explicit standards for what children should know and be able to do before they start school.

The informal learning is typically carried out in the context of day-to-day social interaction between children and staff, in addition to specific activities for different age groups.

From 1<sup>st</sup> of August 2018, national child care regulations specify that there should be at least one educated pre-school teacher per seven children aged below three, and one per 14 children aged above three. The pre-school teacher education is a college degree, including supervised practice in a formal child care institution.<sup>6</sup> Each

<sup>6.</sup> Note that the empirical work sited in this paper is based on child care centers where the former regulation was in place. According to this, there should be at least one educated pre-school teacher per ten children aged below three, and one per 18 children aged above.

teacher typically works with two assistants, but this has varied somewhat across municipalities. There are no formal educational requirements for the assistants, but many high schools offer vocational training as 'child- and youth worker' (*barne- og ungdomsarbeider*). This entails a two-year school program and two years of practice. In 2015, about 27% of the assistants held a certificate as a child- and youth worker.

The lack of regulations of the number of children per adult in the child care center imply that this ratio historically has varied across municipalities. This has been a much-debated issue (see, i.e. Nordrum [2012]), and in a 2012 report by a government appointed committee, new legal requirements to regulate child care centers were suggested. Importantly, it was suggested to regulate the adult-to-child ratio. This should be 1/3 for children below 3, and 1/6 for children above 3 (NOU 2012). Recently, a new regulation was sanctioned, and from 1 August 2018, a child care center should have an adult-to-child ratio of 1/3 children below 3, and 1/6 children above 3. The child care centers will have until 1st of August 2019 to meet this new regulation.

#### 8.3.1 THE COST OF CHILD CARE

About 50% of child care institutions are public, while the remaining are privately operated. Both public and private institutions require municipal approval and supervision to be entitled to national subsidies that cover around 80% of costs. Since 2003, there has been a maximum parental copayment set by the government. This amounted to 2,730 NOK per month for a full-time slot in 2017. In addition, the childcare centers may charge a fee that covers food serving.

While the maximum price is affordable for most families, it is still a substantial amount for a low-income family. From 2015, 4- and 5-year-old children from low-income families<sup>7</sup> became entitled to a free place in child care amounting to about 20 hours per week (half day). From August 2016, this was expanded to 3-year-old children as well. It is still not clear whether this policy has been successful in recruiting more children to the child care center. However, we do know that a policy providing 20 hours of child care to all children independent of their family income, that was introduced in certain city districts in Oslo with a high share of immigrants among its population, succeeded in increasing the enrolment rates of children with an immigrant background (Drange and Telle 2015).

<sup>7.</sup> Earning below 417 000 NOK.

#### 8.3.2 THE CASH-FOR-CARE POLICY

In August 1998, the Cash-for-Care (CFC) subsidy was introduced. The CFC scheme gave families with one- or two-year-old children the right to a monthly cash transfer, and the condition for receiving the full subsidy was that the child could not enrol in child care. The government at the time stated that the main goals of the subsidy were to ensure that families had more time to take care of their children, to allow families themselves to choose what kind of care they wished for their children and to equalize public transfers to families, regardless of the kind of care the family wanted for their child. When introduced, the CFC constituted a significant part of family earnings, particularly for low-income families. The annual allowance was 36,000 Norwegian kroner (NOK), and the average annual fee for publicly subsidized childcare was about NOK 34,600 with some price subsidies for low-income families. Bettinger, Hægeland and Rege (2011) demonstrate that for a family in the bottom income quartile, the effective after-tax price of a full-time day care place for a one- or two-year-old child constituted about 40 percent of average family earnings.

From 2012, the CFC subsidy is no longer available for 2-year-olds. Today only children 12–23 months are eligible. The current subsidy amounts to 7500 NOK. It is possible to receive 50% of the subsidy if the child attends child care less than 20 hours per week, although this depends on whether it is possible to obtain a part time childcare place.

The fact that there is a substantial subsidy available if you do not enrol your child in child care, may seem at odds with the general Norwegian child care policy. If we accept the premise that child care is beneficial for most children from an early age, keeping the child at home in order to receive a subsidy, might pose an obstacle to the child's individual development. At the same time, in families where one of the parents do not have an attachment to the labor market, the CFC subsidy may increase family income quite substantially. Hence, if there are other siblings in the family, the increased income from the CFC subsidy could be positive for their development. Several studies have showed that a higher household income can improve the child's cognitive development through the improved consumption opportunities of the family (Duncan et al. 2010, Dahl and Lochner 2012). However, the connection of these two policies is not a given. An alternative could be to have more extensive transfers to low income families with young children, that were not connected to child care enrolment. This is also what was suggested in an OECD report on migrant education from 2009. The report's authors

<sup>8.</sup> The transfer was and is tax-free.

advise that removing the financial support could hurt the children in question through a negative impact on their home environment, but that the negative incentives for participation in child care should be addressed (Taguma et al. 2009).

#### 8.3.3 CHILD CARE ENROLMENT IN NORWAY

Examining the statistics on the overall share of child care enrolment of children in Norway, Figure 8.1 displays how enrolment rates change over the years 2008–2014 for 1–2 year olds and 3–5 year olds, respectively. The figure is based on annual reports from the child care centers, and should capture children enrolled as of 15<sup>th</sup> of December the relevant year. The childcare centers report the total number of children enrolled by age.

Turning to the figure below, we see that over the recent years, there has been an increase in child care enrolment. This increase is mainly driven by higher attendance rates among the younger children. Most children 3–5 are enrolled and have been throughout the period. In 2014, the enrolment for the oldest children is 97%. For the group of younger children there has been an increase over the years, from just below 75% in 2008 to about 80% in 2014. Hence, the vast majority of children between 1 and 5 are enrolled in child care in Norway.

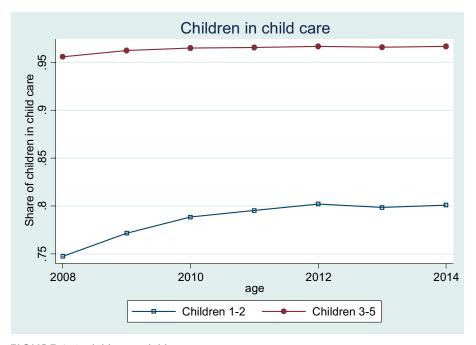


FIGURE 8.1 Children in child care 2008-2014.

The high enrolment rates mask that there still are large differences in enrolment between children from different backgrounds, particularly when it comes to the youngest children. We do not have registry information on individual childcare enrolment, but we do know the number of children with a minority language background attending. In Figure 8.2 below, share of children in child care by age and year is reported for children without and with immigrant background respectively. The shares are constructed by summing up all children in child care with a minority language background and dividing it by the number of children of the relevant age that have an immigrant background. We see that shares vary substantially for the two groups of children. Virtually all majority language children (upper panel) attend child care when they are between 3-5 years old throughout the period, whereas the corresponding share for the younger children aged 1–2 is about 80% in 2008, and increasing slightly to about 85% in 2014. For children with a minority language background, about 85% of the older children are enrolled in 2014, a small increase from the start of the period. For the younger children, enrolment is lower, but the increase is stronger for this group. In 2008 below 40% of children 1–2 years old were enrolled in child care, whereas the corresponding share in 2014 had risen to about 55%.

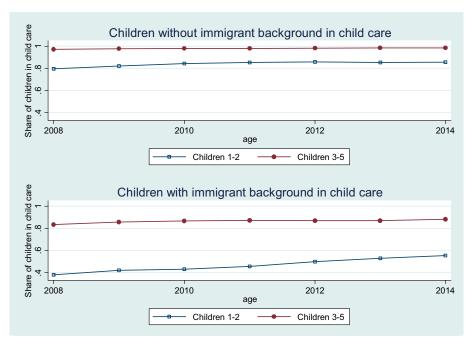


FIGURE 8.2 Children in child care 2008-2014, by immigrant background.

### 8.4 COMPARATIVE STATISTICS: CHILD CARE IN AN INTERNATIONAL PERSPECTIVE

Norway has a high enrolment of children aged 3–5 compared to most countries. For children 0–2, Norway ranks a little lower. The latter may be explained by the country's extensive parental leave policy implying that few children below one year of age will enrol. For 2-year-olds the enrolment is above 90%. Key findings in a recent OECD report state that enrolment of 0-to-2-year-olds in formal childcare and preschool services differ considerably across the OECD (OECD 2016). Around 35% of children aged 0-to-2 participate in some form of childcare, but this varies substantially from as low as about 6% in the Czech Republic to as high as almost 66% in Denmark. Participation rates tend to be highest at around or above 50% in many of the Nordic (Denmark, Iceland, Norway and Sweden, but not Finland) and 'Benelux' OECD countries (Belgium, Luxembourg and the Netherlands), plus also France and Portugal.

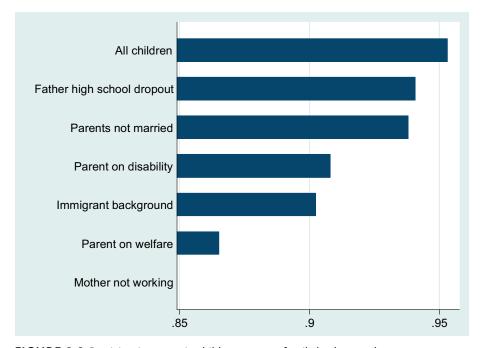
For 3–5-year-olds, Norway is mentioned as one of ten countries where enrolment rates remain high across all three individual years of age, the others being Belgium, Denmark, France, Germany, Iceland, Israel, Italy, Spain, and Sweden (OECD 2016). In these countries enrolment rates for 3-, 4- and 5-year-olds are all above 90%. In others, however, participation rates for 3-year-olds are far lower than for the older children. In the US, less than 42% of 3-year-olds are enrolled in pre-primary education, compared to over 90% of 5-year-olds.

Enrolment by immigrant background is not available in the OECD data, but may be obtained by looking at specific countries. For the US, Park et al. (2015) report that the average enrolment rate is 47% for 3–4-year-olds with a native background, whereas it is 43% for this age group with an immigrant background. However, enrolment rates by immigrant background vary substantially across states.

#### 8.5 CHILD CARE ENROLMENT AND CHILD BACKGROUND IN OSLO

We do not have registry information on child care enrolment in Norway. Such data are, however, available for Oslo, where we know when the individual child enrols in child care. This allows for much more detailed analysis of childcare use. Using data from Oslo, we can study more thoroughly how child care enrolment varies by family background such as parental income and education. The available data cover children born 2004–2007. Turning first to attendance, we see from Figure 8.3 that about 95 percent of children had attended child care (in Oslo) before school start. However, the average participation rate hides the fact that it rose con-

siderably in this period, from 87 percent for the 2004 cohort to 95 percent for the 2006 cohort. From the figure, we observe that children from a more disadvantaged background have somewhat lower attendance rates, as measured along several dimensions. The attendance rates are particularly low for children from immigrant families (about 90%) and children of a parent receiving welfare benefits (about 87%).



**FIGURE 8.3** Participation rates in child care across family background.

Figure 8.4 displays the number of years a child has been enrolled in child care (in Oslo) before school start. On average, a child is enrolled close to four years in childcare. In line with what we would expect from observing Figure 8.3, children from more disadvantaged backgrounds tend to spend less time in child care than their more advantaged peers. In families where the mother is not working, the child spends less than three years in child care prior to school start, about the same as if one of the parents receive welfare benefits. Children with immigrant background also spend about a year less in child care before school start compared to

<sup>9.</sup> The children must reside in Oslo at the entry of the calendar year they turned six to be included in the sample. Note that we only observe if the child attended child care in Oslo. See Drange and Telle (2015) for details.

the average child. This clearly shows that there are differences in child care use across children from different backgrounds. Keeping in mind that child care has been shown to be particularly beneficial for children from disadvantaged families, as well as for children with an immigrant background, this may be of concern.

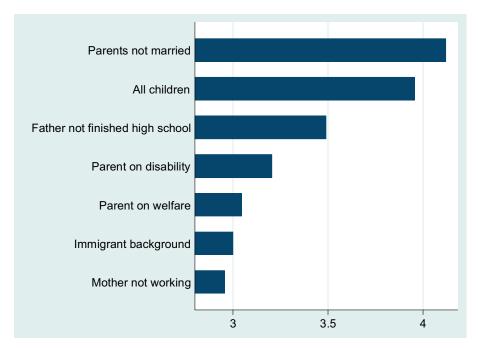
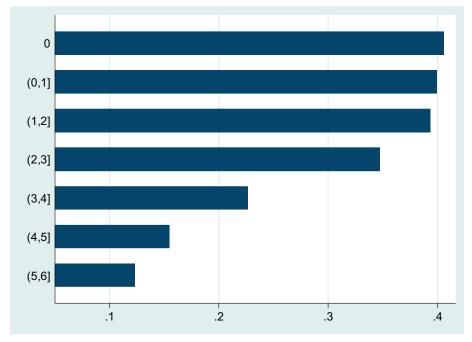


FIGURE 8.4 Years in child care before school start.

Given these socioeconomic differences in child care attendance, we would also expect a positive correlation between child care attendance and later school performance. For Oslo, we have data from language tests in first grade. These tests are meant to identify the weakest pupils to secure that the school allocates resources to children who are underperforming. In Figure 8.5, we see that among children with more child care experience, there is a lower share who scores poorly on the first-grade language test. For children with no child care experience, about 40% score poorly on the language test. Children who attend one to two years, do not really score much higher, whereas attending four to five years reduces the share who performs poorly sharply to about 15%. We should, however, keep in mind findings from Figure 8.4 that shows that children without immigrant background attend child care longer. Hence, the reason why children attending child care for a shorter period get a lower score on first grade language tests, is likely

due both to having spent less time in child care as well as having an immigrant background.



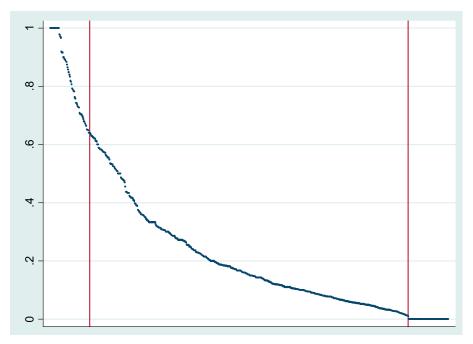
**FIGURE 8.5** Share of children scoring poorly on 1<sup>st</sup> grade language test by years in childcare.

We would not only expect socioeconomic differences to exist between observable categories (e.g. between children from immigrant families and other children), but also within such categories. For example, among children from immigrant families, we would expect the most advantaged to attend childcare more and earlier than the disadvantaged. Though this could also reflect a causal effect of attending childcare, there are clearly important selection processes determining child care attendance.

#### **8.6 CLUSTERING IN CHILD CARE CENTERS**

While findings suggest that most children benefit from enrolment in child care, different factors may affect how successful centers are in promoting child development. One such factor is the composition of the children in a center. A center with a very high share of children speaking a minority language will clearly face

a bigger challenge securing that all children are able to speak Norwegian when they start school, compared to a center with only majority language-speaking children. To better understand the challenges faced by the centers in Oslo, we will now look at how the composition of children varies across child care centers. In the following plots, centers must have at least 10 children to be included, and the sample now includes all children enrolled in publicly subsidized child care in Oslo in 2011.



**FIGURE 8.6** Distribution of child care centers after share of children with immigrant background.

In Figure 8.6, we see that children from immigrant families clearly are unevenly distributed across centers. In about 15 percent of the centers, there are no children from immigrant families, while in the 10 percent centers with the highest share of children from immigrant families, about 80 percent of the children have such background. This could reflect the fact that there is substantial clustering of immigrants across city districts in Oslo, and that children attend a childcare center in their own district. However, when taking a closer look at the data, the composition of families within city districts cannot alone explain the clustering. In Drange and Telle (2018) we show that while there are substantial differences in the mean share of children with immigrant background across city districts related to geographi-

cal residential segregation across the city, there are also substantial differences within districts (the districts are identical to the catchment areas of the centers). Moreover, the segregation is also very high within districts with a high share of children from immigrant families.

In Figure 8.7, we show the rate of the mean of the given background characteristic for the top and bottom decile of centers. The grey bars indicate the given share of children with the indicated background in the centers with the lowest 10% of children with such background, and the black bars similarly gives the share of children in the center with the highest 10%. Thus, when considering immigrant background, the figure reports that the centers with the lowest share of children with such background have 0%, whereas the centers with the highest share have a share of about 80%, in line with findings from Figure 8.5. Proceeding to the share of children with mothers not working, we see that in the highest decile of child care centers almost 60 percent of children are from families where the mother does not work. In the lowest decile, the corresponding figure is less than 10 percent. We see a similar clustering across all background characteristics, and note that while none of children come from families on welfare in the lowest decile, almost 30 percent have this background in the highest decile of child care centers. For all measures, it is evident that disadvantaged and advantaged children are clustered in different centers.

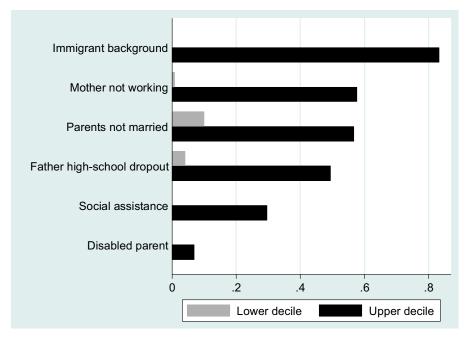


FIGURE 8.7 Family background inequality across childcare centers.

#### 8.7 CONCLUDING REMARKS

Evidence from the Norwegian setting suggests that child care may enhance child development, both for the 3–5-year-olds and for toddlers (Havnes and Mogstad 2011, Drange and Havnes 2015). Both studies find that child care is particularly important for children from disadvantaged families, a finding that resonates well in the international literature (Almond and Currie 2011). This suggests that a well-designed child care policy is important to enable all children to develop abilities on a basis of equal opportunity, as Norway has committed to when ratifying the UN convention on the rights of the child. This understanding of the role of child-care is present in the jurisprudence of the Committe on the Rights of the Child and is reinforced by the broader express obligation in the CRC to support parents with child-rearing through 'services for the care of children' and all working parents with access to childcare.

Norway has an extensive child care program that covers the vast amount of 3–5-year-olds. Enrolment rates for younger children are lower, but whether this is due to a lack of supply or parental choice, is not clear. This distinction is obviously very important for policymakers. However, given that the child enrolment guarantee has not been extended to all children when they turn 1, the government and the municipalities should improve the legislation to secure that being born in June to October ceases to play an important role in determining when a child will enrol. This can matter for child development, as documented in Drange and Havnes (2019).

The Cash-for-Care subsidy is arguably an obstacle for child care enrolment in families with a low income and where the mother is already at home. For a low-income family, the transfer may be a substantial part of family earnings. Thus, if a family is on the margin of enrolling a child in child care, such a subsidy could easily tip their decision and lead to non-enrolment. This might also be better for other children in the family, because family income will increase. A policy that creates such incentives, is at odds with the fact that child care is beneficial for young children, particularly for children from low-income families. The current connection between the cash transfer and child care is unfortunate.

Overall, the current Norwegian child care policies are fairly successful in securing enrolment of children in child care in Norway. The country ranks high compared to most other countries, particularly for children over 3 years old. Child care is affordable, and with the latest policy changes where a half day in child care is free of charge for low income families, most families do have the opportunity to enrol their child. Still, for Oslo, where we can look more closely into how child care attendance varies across children from various socioeconomic backgrounds,

there is clear evidence that quite a few children do still not enrol, or enrol late. It turns out that there is a lower enrolment rate among children from disadvantaged families, and this pattern is particularly pronounced for children with an immigrant background. Moreover, the composition of children varies across centers and areas in Oslo, and this segregation may hamper the individual centers' ability to promote equality of opportunity.

We do not know whether the pattern of varying enrolment rates by background is representative for the entire country, but we know it is representative for children from immigrant families. We also do not know the reason why the pattern looks like this. It might be due to child care costs, it might be due to the cash-forcare subsidy and it might simply be due to parents preferring home care over formal care. The means to tackle the discrepancies in enrolment rates, are to make sure that child care is affordable to all, secure a quality that parents feel comfortable with and to remove the connection between the cash transfer and child care. There might also be gains from providing information to parents that are new in Norway, and less familiar with early child care. For the youngest children, it is hard to think of a system where other than parents decide whether to enrol the child. It is, however, important that parents can make an informed decision without having to consider costs or lost income, and that the decision can be taken independently of the child's birth date.

#### **REFERENCES**

- Almond, D., and J. Currie. 2011. Human capital development before age five. In: D. Card and O. Ashenfelter (eds.), *Handbook of Labor Economics*, Elsevier, 4(B), 1315–1486.
- Bettinger, E., T. Hægeland, and M. Rege. 2014. Home with Mom: The effects of stay-at-home parents on children's long-run educational outcomes, *Journal of Labor Economics*, 32(3), 443–467.
- Bleakley, H., and A. Chin. 2008. What holds back the second generation? The intergenerational transmission of language human capital among immigrants. *Journal of Human Resources*, 43(2): 267–298.
- Cornelissen, T., C. Dustmann, A. Raute, and U. Schönberg. 2018. Who benefits from universal child care? Estimating marginal returns to early child care attendance, forthcoming in *Journal of Political Economy*.
- Dahl, G., and L. Lockner. 2012. The impact of family income on child achievement: Evidence from the earned income tax credit. *The American Economic Review*, 102(5): 1927–1956.
- Dearing, E., H. D. Zachrisson, and A. Nærde. 2015. Age of entry into early childhood education and care as predictor of aggression: Faint and fading associations for young Norwegian children. *Psychological Science*, 26(10): 1595–1607.

- Drange, N., and T. Havnes. 2019. Early child care and cognitive development: Evidence from an assignment lottery. *Journal of Labor Economics*, 37(2), forthcoming.
- Drange, N., T. Havnes, and A. M. J. Sandsør. 2016. Kindergarten for all: Long-run effects of a universal intervention. *Economics of Education Review*, 53, issue C, p. 164–181.
- Drange, N., and K. Telle. 2015. Promoting integration of immigrants: Effects of free child care on child enrollment and parental employment. *Labour Economics*, 34: 26–38.
- Drange, N., and K. Telle. 2017. Preschool and school performance of children from immigrant families, *Empirical Economics*, 52(2), 825–867.
- Drange, N., and K. Telle. 2018. *Universal Child Care and Inequality of Opportunity: Descriptive Results from Norway*. Discussion Paper 879, Statistics Norway.
- Duncan, G. J., K. M. Ziol-Guest, A. Kalil, and K. Telle. 2010. Early childhood poverty and adult attainment, behavior, and health. *Child Development*, 81(1): 306–325.
- Havnes, T., and M. Mogstad. 2011. No Child Left Behind: Universal child care and long-run outcomes. *American Economic Journal: Economic Policy*, 3(2): 97–129.
- Kalil, A. 2014. Inequality begins at home: The role of parenting in the diverging destinies of rich and poor children. In P. Amato, A. Booth, S. McHale, and J. Van Hook (eds.), *Diverging Destinies: Families in an Era of Increasing Inequality*. New York: Springer, 63–82.
- Nordrum, J. C. F. 2013. Ny barnehagelov? NOU 2012: 1 Til barnas beste og Meld. St. 24 (2012–2013) Framtidens barnehage. *Tidsskrift for familierett, arverett og barnevernrettslige spørsmål*, 2, s. 109–132.
- NOU 2012. Til barnas beste. Ny lovgivning for barnehagene. Public report, 2012:1.
- OECD 2016. *Enrolment in childcare and pre-school*, Note PF3.2, OECD Family Database http://www.oecd.org/els/family/database.htm
- Park, M., M. McHugh, J. Zong, and J. Batalova. 2015. *Immigrant and Refugee Workers in the Early Childhood Field: Taking a Closer Look*. Washington DC: Migration Policy Institute.
- Schjølberg, S., R. Lekhal, M. V. Wang, I. M. Zambrana, K. S. Mathiesen, P. Magnus, and C. Roth. 2008. Forsinket språkutvikling: En foreløpig oversikt basert på data fra den norske mor og barn undersøkelsen. Reports 10, Folkehelseinstituttet.
- Shonkoff, J. P., D. Phillips, and N. R. Council. 2000. From Neurons to Neighborhoods: The Science of Early Child Development. First ed. National Academy Press.
- Taguma, M., C. Shewbridge, J. Huttova, and N. Hoffman. 2009. *OECD Reviews of Migrant education*. Norway, OECD Report.