How early and how long?
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**Title:** How early and how long?

**Abstract:** Day care centres have become a normal part of Norwegian childhood, even among quite small children. In 1970 less than 3 per cent of Norwegian children of pre-school were enrolled. At the end of 2009 as much as 70 per cent of children aged 12 to 24 months were enrolled and for 90 per cent of them a full day stay had been arranged. Norwegian children with small children opt for an early start at a day care centre. However, the day care centre employees do not share the same views as the users of the services they provide. Only one third of them express the opinion that children may start at the age of one and have a full day stay at this age. The article discusses this discrepancy between the users and providers of public financed day care.

**Keywords:** Toddlers; Employees in child care centres; Attitudes to early start in ECEC

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Over the past 40 years attending the day care centre has become a normal part of Norwegian childhood. In 1970 less than three per cent of Norwegian children of pre-school age were enrolled in day care centres. In 2009 the coverage rate for children aged 1 to 5 was close to 90 per cent. Successive governments, not least the present one, have made great efforts to meet an ever increasing demand for day care centre places, introducing for instance a statutory entitlement to a place from the age of one. At the end of 2009 as much as 70 per cent of children aged 12 to 24 months were enrolled, and for 90 per cent of them a full day stay had been arranged. A great majority of Norwegian parents choose to send their toddlers to a day care centre on a full day basis.

With a guaranteed supply of public day care from the age of one, the right to decide if and when a child should start at a day care centre rests with the parents alone. The decision made is likely to be the result of a mix of interests, knowledge and normative attitudes and cultural beliefs. Gender equalisation gives rise to labour market participation issues that necessitate non-parental care of children. Parents are influenced by normative attitudes and cultural beliefs which impart to them ideals and models for family life and child care. They may also have a more or less secure knowledge of the effects of day care centre enrolment on a child’s early development and later achievements.

However, since the attendance rate is 70 per cent at the age of one and 85 per cent at the age of two, the majority of Norwegian families with small children apparently opt for an early start at a day care centre. A centre principally delivers care and educational services, provided by the centre’s educationally trained staff and assistants. The question this paper seeks to answer is whether or not day care centre staff share the same views as the users of the services they provide. Do they applaud or are they sceptical of the substantial increase in toddlers at the centres? We expect the ideas and attitudes described above to be reflected among the employees. In addition, as employees, they will have expectations with regard to the impact of the huge increase in the number of very small children on their working conditions. As employees they might oppose changes, not least if they feel that such changes are not fully compensated for or if
they feel that the centres are not prepared or equipped to meet the new situation. They may also feel a lack of competence in caring for and educating very small children. In a recent evaluation, Norwegian pre-school teacher education was criticised for not giving enough attention to the needs of the youngest children (NOKUT, 2010).

In the following we describe the development towards almost universal public child care (2). In (3) we describe and discuss changing attitudes towards day care centre attendance both among parents and among day care centre employees. In (4) we present our new data on day care centre staff and their views on the appropriate starting age and length of daily stay. In (5) we present and analyse a model to explore if and to what degree the expected variables explain the variation of attitudes. In the final section (6) we discuss our findings.

THE ROAD TO UNIVERSALISTIC EARLY CHILDHOOD EDUCATION AND CARE

Table 1 sums up the development since 1970, when public day care was a rather marginal phenomenon, and up to the end of 2009. The table shows that the expansion started with children close to school age. In 2000 almost 80 per cent of children between 3 and 5 were enrolled in a centre. In recent years growth has been strongest among children aged one or two. In 2000 slightly more than one third of this age group attended a day care centre. Nine years later 77.1 per cent of children in this age group were enrolled (table 1).

Table 1. Day care centres: Children enrolled and coverage by age, 1970–2009.
Source: Gulbrandsen 2007, Statistics Norway

| Year | Children in day care centres | Coverage 1–2 | Coverage 3–6* |
|------|-----------------------------|--------------|---------------|
| 1970 | 12 711                      | 0.9%         | 4.3%          |
| 1980 | 78 189                      | 6.8%         | 32.0%         |
| 1990 | 139 350                     | 15.4%        | 57.9%         |
| 2000 | 189 837                     | 37.1%        | 78.1%         |
| 2003 | 205 172                     | 43.9%        | 85.1%         |
| 2009 | 270 041                     | 77.1%        | 96.2%         |

* From 2000: 3–5

The entry of small children has changed the daily life of day care centres (table 2). At the outset Norwegian day care centres were closely tied to the child welfare system, and a child’s age had little bearing on whether or not assistance was received from the child welfare authorities. In 1970 almost 11 per cent of enrolled children were below the age of three. In the 1970s, however, the expansion of day care centres was primarily based on children close to school starting age. In 1980 only 3.7 per cent of enrolled children were below the age of three. Since that time the attendance rate among the youngest children has increased. At the end of 2009 more than one out of three children at day care centres had not yet reached the age of three.

Table 2. Per cent of children in child day care centres below the age of 3, 1970–2009

| Year | 1970 | 1980 | 1990 | 2000 | 2003 | 2009 |
|------|------|------|------|------|------|------|
| Percent children | 10.8 | 3.7 | 13.6 | 22.6 | 25.0 | 35.8 |
THE APPROPRIATE AGE FOR ENROLMENT IN A DAY CARE CENTRE

In tandem with this growth there has been a public debate about day care centres. In the early phase much of the debate focused on whether or not day care centres should exist at all. In the 1950s the view that spending every day at a day care might be harmful for children was fairly widely held. The few day care centres that existed were a part of the preventive child welfare system. Home based care by the mother was seen both as the preferred and the normal form of care. Gradually the debate and the arguments moved towards greater acceptance of child day care centres. In contrast to contemporary attendance practice, this acceptance was confined to the eldest pre-school children and only for a few hours per day. However, the debate in Norway continues, and has recently focused on the attendance of children of the age of one. While day care for children aged 3–5 is almost universally accepted, concern is being expressed about attendance of the youngest children. Some highly articulate spokespersons in the public debate have advocated the view that attending day care centres may be harmful for children in their early stage of life (see for instance Tveiterea, 2008). Such arguments are based both on psychological research rooted in attachment theory and on brain research. A central point in attachment theory is that an early start at a day care centres might jeopardise the child’s attachment to its main care giver (Foss & Klette, 2010). However, a leading European representative of this research tradition, Lieselotte Ahnert, has concluded that out-of-home care, even for infants and toddlers, has no developmental consequences if the day care centre meets standards of high quality (Lamb & Ahnert, 2006). Staff with high and relevant competence, with high work stability and free from overwork, appear to be a necessary condition for quality child care according to this research.

The huge increase in enrolment of very small children in day care centres shown in table 1 is a result both of increasing supply and increasing demand in the child care sector. In Norway mothers were highly instrumental in the expansion of publicly financed day care (Ellingsæter & Gulbrandsen, 2007). Moreover, the increased demand for places at day care centres surfaced fairly recently. According to a survey carried out in autumn 1992, only 13 per cent of parents with children below school age considered day care centres to offer the best type of care for children between 1 and 3. Even for children between 3 and 6 only 47 per cent viewed day care centres as the best option. A majority of the same parents answered that children should reach at least the age of three before enrolment in a day care centre (Blix & Gulbrandsen 1993, s. 33). As recently as 2002 only 23 per cent of parents with children under six answered that a place in an ordinary day care centre was the best day care for children at the age of one. 53 per cent expressed the same opinion about children at the age of two, while a huge majority preferred day care centres for elder children (Ellingsæter & Gulbrandsen 2003, s. 62). At the same time the actual rates of enrolment were almost the same in the two age groups. However, parents had applied for a place for another third of each of the two youngest age groups (Ellingsæter & Gulbrandsen 2003, s. 64). From 2009 onwards Norwegian children have been entitled to the offer of a place in a day care centre at the age of twelve months, or more correctly, if they are born before the end of August the year before the new enrolment.

Surveys of staff members’ attitudes are far less usual than surveys among parents. In a nationwide survey from the early 70s staff members were asked how many hours’ daily attendance was best for children at different ages (Nafstad, 1976). Table 3 is based on a table from the main report from this research project. If we interpret the unanswered category as non-attendance, a clear majority of the staff members believed that children under two should not attend a day care centre at all. This share was reduced to a third for children between two and three, but the majority preferred a very short daily stay for this age group. Almost all considered that day care centres were the best for children close to school age, but even here those in favour of a full day stay were in the minority. For children between one and two, with one exception, a majority of all groups of employees were against day care centres. The only exception was children’s nurses with a small majority in favour of day care centres. Among assistants, centre managers, educationally trained staff and trainees a majority considered that the best solution for children at this age was to be kept away from such centres.

We have found no similar survey prior to our own survey which we carried out in 2009 and to which we devote the remainder of this paper. However, indirect evidence from studies of educationally trained staff indicates that the em-
Employment rate among mothers educated as pre-
school teachers has throughout been lower than
among all mothers (Gulbrandsen 2005, s. 13). Is
it still the case that providers of this service more
often prefer to offer less of the service than the
users actually demand?

DATA: THE MAFAL-STUDY

The Mafal-project is an ongoing research project
focusing on day care centre staff. Mafal is an ac-
ronym derived from the name of the project
which translates into Managing the role of pre-
school teacher in a field where professionalisa-
tion is contested. The study is not, however, re-
stricted to trained day care centre staff. Since the
latter’s relationship to staff members with no ed-
cucational training presumably makes a signifi-
cant contribution to their forming of a profes-
sional role, data from day care centre assistants
have also been collected. The data were collected
in spring 2009.

The study is designed as a questionnaire dis-
tributed to staff members at a nationwide sample
of 1,000 day care centres. Managers at the se-
lected centres were asked to deliver the question-
naires to staff members with and without educa-
tional training. They were asked to return to us
at least one, and at most three, questionnaires
from staff members employed as senior educa-
tional staff and the same number from assistants.
The managers were also asked to complete a
short questionnaire regarding the day care cen-
tre, e.g. the number of children enrolled, owner-
ship etc. We received answers from almost 60
per cent of the selected centres. 1357 assistants
and 1192 pedagogical leaders completed the
questionnaire. The latter group is overrepresent-
ed in our data. For many years educationally
trained staff have been in a minority position in
numerical terms. In 1970 the proportion of staff
educated as pre-school teachers (barnehagelær-
er) was 31.4 per cent. In 2000 the rate was the
same (31.3 per cent). In 2007 the rate had shown
little change (31.7 per cent). Even this figure
seems to be a little high. Analysis based on data
from Statistics Norway indicates that some cen-
tres report as pre-school teachers staff members
who have not completed their educational train-
ing. In 2007 the pre-school teacher rate comput-
ed from register data was 27.1 per cent (Gul-
brandsen 2008, 2009).

As a dependent variable we combine two ques-
tions from this survey. The first question mea-
sures what staff members consider to be the ap-
propriate age for enrolment in a day care centre.
The second measures what staff members con-
sider to be a suitable duration of stay in a day
care centre for children at different ages.

For the employees the question regarding ap-
propriate starting age for children is at least two-
fold. They may have an opinion based on what
they as parents and citizens have of personal in-
terests and feelings about what is best and right
from a social and political vantage point. But
this huge increase in very small children will also
concern them strongly by changing their work-
ing conditions. To elicit their attitudes to the en-
rolment of small children in daycare centres, we
asked the following question: How old do you
think a child should normally be before it starts
at a day care centre? The six pre-coded alterna-
tives are shown in table 4. No-one chose the last
alternative: older/never. A slight majority, 53 per
cent of the employees, answered that children
should start at the age of 12 months or earlier. 46
per cent answered that children should be older
before they started. The remainder, between 1
and 2 per cent, did not answer this question.
We also posed a question about how long chil-
dren should normally stay in a day care centre
per day. The employees were first asked about

| Age     | Unanswered | 0 hours | 1 to 5 hours | 6 hours or more |
|---------|------------|---------|-------------|-----------------|
| 0–1 years | 19         | 52      | 26          | 3               |
| 1–2 years   | 18         | 38      | 41          | 3               |
| 2–3 years   | 16         | 16      | 63          | 5               |
| 6–7 years   | 11         | 0       | 57          | 32              |

Table 3. Attitudes to day care attendance based on the age of the child (How many hours per day are best
for the child). Employees in Norwegian day care centres 1972. Per cent. Source: Nafstad 1976:24
children below three and then about children above three. The distributions of answers on these two pre-coded questions are shown in table 5. For the eldest children a clear majority of employees prefer to offer a full day stay. For children younger than three, a full day stay is the preference of a minority.

Table 4. Opinions among staff members about the appropriate age of enrolment in day care centres. Per cent. Source: The Mafal survey 2009

| Proper age | 6 months | 9 months | 12 months | 1 1/2 years | Two years | Three Years | No answer | Number |
|------------|----------|----------|-----------|-------------|-----------|-------------|-----------|--------|
| Percent    | 0.3      | 5        | 47        | 25          | 17        | 4           | 2         | 2549   |

As already mentioned, a full day stay is very common in Norwegian day care centres. It is impossible to estimate the exact length of stay for children under three from the data available on the home page of Statistics Norway (KOSTRA). The statistics tell us how long stay centres and parents have agreed on, not how many hours children actually stay in the centres. However, for all children between one and five enrolled in centres at the end of 2009, 90.6 per cent of the parents had entered into an agreement of 33 or more hours per week. Thus a great majority of children under three have the opportunity to stay longer than the number of hours two-thirds of the staff say they think children at this age should stay.

Our focus here is on the combination of early start and long days. We therefore construct our dependent variable by including staff members who answered that normally children can start at the age of one year and stay 6 hours or more per day in a day care centre. This combination of answers was reported by 30 per cent of the staff members. Employees are apparently more sceptical of the present supply of day care than the parents are as users of their services.

Table 5. Staff members distributed by their opinion on how many hours per day children at different ages normally should stay in a day care centre. Per cent. Source: The Mafal survey

| Hours per day | None at all | Less than 4 hours | 4–6 hours | 6–8 hours | More than 8 hours | No answer |
|---------------|-------------|-------------------|-----------|-----------|-------------------|-----------|
| Under 3       | 1           | 2                 | 52        | 42        | 0.4               | 3         |
| Over 3        | –           | –                 | 16        | 79        | 2                 | 2         |

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Analysis
We analyse the variation in our dependent variable by using a model which includes independent variables describing permanent characteristics of the employees, their work situation and characteristics of the centres where they are employed. In the following multivariate analysis we have chosen to rely on linear binary regression. We use this analysis model instead of the more often used logistic regression due to the fact that when variables have distributions like our dependent variable the results will be the same as when using logistic regression. The coefficients in binary linear regression will also intuitively have more meaningfulness and be simpler to interpret (Hellevik, 2009). It is probably even more important that we strictly cannot compare log-odds ratios or odds ratios for similar models across groups or across models with different independent variables in a sample (Mood, 2010). The following independent variables are included.

Age of the employee: Since the increase in toddler enrolment has taken place rather recently we expect to find increasing scepticism of an early start and long stay with increasing age.

Own children: We wish to include respondents’ own experience as parents. Taking care of one’s own children may provide experience dif-
ferent from that of caring for other children. However, we have no expectation regarding the effects of such experiences on attitudes.

Social background: Earlier research has shown that social background is an important variable for explaining attitudes towards and practice regarding day care centre attendance. More than 25 years ago (Gulbrandsen & Tønnessen, 1988), at the turn of the century (Ellingsæter & Gulbrandsen, 2003) as well as later on (Stefansen & Farstad, 2008), well-educated middle class parents have shown stronger demand for places in day care centres than parents with lower education. Among the staff, educational differences will normally be reflected in the type of job. However, we expect social background may play an important part irrespectively of type of job. We have therefore constructed a variable intended to measure social background by means of questions regarding the education of the employees’ mother and father. A low educational background is defined here as parental education limited to compulsory schooling. Employees with at least one parent with a university or university college level education are assigned to the category high educational background. The remainder are classified as having a medium educational background. The two latter values are used as dichotomies in the model. We expect high education background to increase the probability of preferring an early start and long stay.

Own education: Both the amount and the type of education an employee has completed will normally be described by the job title. A pedagogical leader will normally have completed a longer education than an assistant. Where class-based preferences regarding enrolment age and length of stay in a day care centre are concerned, we expect educationally trained staff to be more likely than assistants to accept enrolment at an earlier age and to be more inclined to favour a long stay. Their training will also inform their view as to the potential benefits of early enrolment and length of stay at a day care centre.

Experience of working with different age groups: We also investigate whether the employees’ own experience of working with different age groups affects their attitudes with regard to appropriate starting age and length of stay. The employees were given three alternatives: work primarily involving the under-threes, the over-threes and children across the entire age range of 0 to 5 years. We expect experience of working with toddlers to have a positive net effect on preference for an early start and long stay.

Experience from employment in day care centres: Normally the time an employee has worked in a day care centre will correlate positively with age. However, increasing experience may produce increased competence and confidence in own work performance. We therefore expect to find a positive net effect of the length of employment in a day care centre.

Day care centre size: Structural quality of Norwegian day care centres is positively correlated with the size of the centres (Winsvold & Gulbrandsen, 2009). Assuming that high structural quality may increase the capacity to take care of small children, we expect to find that with increasing size of the centre, employees would be more likely to accept an early start and long days.

Organisation of the centres: Traditionally day care centres, if they are big enough, are organised in two or more distinct sections. 80 per cent of the centres are organised in this way (Winsvold & Gulbrandsen 2009, s. 94). However, recently ever more centres are organised without such strict division into sections and rely instead on so-called bases. Since the introduction of bases, and toddler expansion, are both a rather recent phenomenon, we expect employees in base-organised centres to have a greater preference for an early start and long stay than other employees.

Ownership: Half of Norway’s day care centres are privately owned. At least some types of privately owned centres are expected to be more eager than municipally owned centres to engage in inter-centre competition. Managing the toddler expansion in the best way might be one element of such competition. We therefore expect to find higher acceptance of early start and long stay among employees in the private day care sector than in the municipal.

Density of pre-school teachers: In line with our expectation of higher acceptance of early start among pedagogical leaders than among assistants, we expect the presence of many pre-school teachers in a centre to have a positive effect on employees’ assessment of the capacity of a centre to meet a toddler increase. We therefore expect to find preference for early start and long stay to increase with increasing density of educationally trained staff in the centres.

Table 6 presents the results of linear binary regression on the dependent variable. The tablel
Table 6. Binary linear regression on starting age and length of stay (early start and long days)

|                                | Start at the age of 12 months and full day stay |
|--------------------------------|-----------------------------------------------|
| Age                            | –.004**                                       |
| Having one’s own children (Ref group: no) | .089**                                    |
| Level of parental education (Ref group: low level) |                                       |
| Medium education               | –.025                                         |
| High education                 | –.073*                                        |
| Type of job: (Ref group: assistant) |                                          |
| Pre-school teacher             | .111**                                        |
| Job experience: (Ref group: working normally with children at all ages) |                                       |
| Working normally with children under 3 | –.006                                    |
| Working normally with children 3–5 | –.052*                                    |
| Number of years employed in a day care centre | .005**                                       |
| Size of the day care centre (number of children enrolled) | .001**                                       |
| Ownership: (Ref group: privately owned) | –.063**                                    |
| Organisational type: (Ref group: organised in distinct sections) |                                       |
| Base organisation              | .066*                                         |
| Per cent of employees educated as pre-school teachers | .000                                          |
| Constant                       | .295                                          |
| R2                             | .051                                          |

*p < .05  ** p < .01

shows the regression coefficients for each of the independent variables. The model shows a modest fit by explaining only 5.1 per cent of the variation in the dependent variable. However, many of our expectations materialised, demonstrated by significant regression coefficients. Some expectations, however, failed. As regards employee characteristics, we found, as expected, a negative net effect of age and a positive effect of educational training. Social background, measured by parent’s level of education, had the opposite effect to that expected. We note that having children has a positive effect on acceptance of an early start and long stay. With regard to work related experience we find, as expected, that increasing length of employment in a centre increases the likelihood of acceptance of an early start while own experience of working with toddlers does not. However, working with the oldest children makes for significant lower acceptance of early start. Of the variables describing the centres, the density of educationally trained staff had no effect. However, centre size, organisational type and ownership showed significant net effects in the expected direction.
DISCUSSION
Over a very short period of time Norwegian parents have increasingly chosen day care centres as their main child care option. A rate of enrolment of 70 per cent at age one and 85 per cent at age two show the attractiveness of this type of care among parents. Politicians from all political parties have supported the expansion of this sector. The providers at the local level, the day care centre employees, have been somewhat less enthusiastic. A great majority of them consider that children should start later and should have a shorter day at the centre than the great majority of toddlers actually have.

With the variables at hand we are not able to explain very much of the variation in employees’ attitudes. Since attitudes have changed widely since a research project similar to ours was carried out in 1972, we would expect older employees to express more conservative views than their younger counterparts, which proves to be the case. Besides this, work experience from a day care centre increases the likelihood of accepting long days for the smallest children. Even if preschool teacher education has recently been criticised for insufficient focus on toddlers, educationally trained staff show a higher acceptance of realities in present-day centres compared to assistants. This may be due to a positive assessment of their own capacity to cope with a rather new situation. But we must not forget that even among the educationally trained staff a fairly clear majority do not express satisfaction with the situation that has come about in the day care sector.

Another important factor may be employees’ assessment of the centre’s capacity to meet the toddler invasion. With increasing size of centre we find an increasing likelihood of accepting an early start and long stay. The same is true if the centre has a base organisation as opposed to the traditional type with distinct units. Moreover, employees at privately owned centres accept, more often than employees in municipally owned centres, an early start and long stay. We expected the density of educationally trained staff to positively affect the appreciation of a centre’s capacity to give care to small children. Contrary to our expectation, the density of educationally trained centre staff had no unique effect.

With reference to parents’ self-reported attitudes in the 1992 and 2002 studies, it seems that practice precedes attitudes as regards the appropriate starting age and amount of time spent in a day care centre. This may also be the case with staff members’ attitudes regarding these issues as toddler enrolment is increasingly viewed as the norm at day care centres. In view of the place toddlers have so far been assigned in pre-school teacher education, one might expect that the expansion of toddlers would pave the way for lay knowledge based on experience of caring for one’s own children. We do find such an effect in our data, but what might be termed the new world of day care centres is most often accepted by the best educated employees. The fact that so many of them meet the new situation with some reservations may be a result of uncertainty about what pre-school teachers have learned and know about really small children. In the light of Lise Lotte Ahnert’s conclusion that the effects of out-of-home care for infants and toddlers highly depend on the way day care centres meet standards of high quality, their reservations are likely to be a result of sound doubts about the adequacy of their professional training to meet the challenges posed by the toddler invasion. In that way we may interpret the reservations as a knowledge-based professional attitude which calls for more knowledge and possibly other, new types of knowledge to do a good job in the day care centres of tomorrow.

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