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Scottish Study of Early Learning and Childcare: Phase 1 Report

CHILDREN, EDUCATION AND SKILLS

social research

Scottish Study of Early Learning and Childcare: Phase 1 Report

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Acknowledgements

We would like to thank all the parents, carers and ELC staff who gave up their time to participate in the surveys and observations, as well as the Care Inspectorate staff who carried out the observations of settings.

Executive Summary

Background

This report outlines findings from the first phase of the Scottish Study of Early Learning and Childcare (SSELC), a research project established to evaluate the expansion of early learning and childcare (ELC) in Scotland.

The expansion programme will see the hours of funded ELC nearly double for all three- and four-year-olds, and eligible two-year-olds, to 1140 per year from August 2020. The expansion seeks to achieve three long term outcomes:

1. To improve children's development, particularly amongst those from the most disadvantaged backgrounds, and to narrow the attainment gap between children from the most and least deprived areas in later years.

2. To enable more parents to have the opportunity to be in work, training or study – again, with a particular focus on benefitting parents in disadvantaged circumstances.

3. To increase family resilience through improved health and wellbeing of parents and children, with a particular focus on families in disadvantaged circumstances.

The SSELC has been designed to evaluate whether the ELC expansion programme has achieved these objectives by measuring outcomes for children and parents receiving the existing entitlement and comparing them to those who receive the increased entitlement.

The aims of Phase 1, which focussed on eligible two-year-olds, were to gather:

- A robust baseline of child outcomes for a cohort of eligible two-year-olds who were receiving 600 hours of funded ELC provision.
- A robust baseline of parent outcomes linked to the above cohort of eligible two-year-olds who were currently receiving 600 hours of funded ELC provision.
- Data and evidence on the quality of a sample of ELC settings linked to the above cohort of eligible two-year-olds.

The eligibility criteria for statutory funded ELC for eligible two-year-olds are aimed at those who experience the greatest disadvantage from their circumstances. This means that most of the children included in the research were more likely to be experiencing varying levels of socio-economic difficulties. The criteria include children who are looked after, are subject to kinship care or guardianship order. They also cover families who are in receipt of certain qualifying benefits[1] (out of work benefits or income related benefits with an annual income below a designated

[1] More information on the eligibility criteria for two-year-olds is available at: https://www.mygov.scot/childcare-costs-help/funded-early-learning-and-childcare/

threshold). In addition to the statutory entitlement, local authorities can use their discretion to offer funded or subsidised ELC over and above the legal entitlement to provide support for a wider range of families. As a result, some two-year-old children included in the research will be receiving funded ELC though these discretionary powers.

Methods

The cohort in the study consisted of children aged between two years and two years six months[2] who received up to 600 hours of funded ELC provision[3] and their parents. Participants were recruited via ELC settings in 17 local authorities. Data were gathered on children via a survey of parents/carers, a survey on the children's development undertaken by their ELC keyworkers (using the same cohort of children as the parent/carer survey) and observations of ELC settings attended by sampled children. Fieldwork was conducted between October and December 2018. A total of 428 questionnaires were received from parents/carers and 574 from keyworkers across 151 settings.

Key findings

Characteristics of the cohort

- Fifty-three percent of respondents were single parents, while 47% lived in two parent households.
- Seventeen percent of respondents had degree level qualifications and a further 19% had other post-school qualifications; 17% had Highers, Advanced Highers or equivalent, and 36% had Standard Grades, National 4/5s or equivalent as their highest level of educational qualification. Twelve percent had no formal qualifications.
- Half of the respondents (49%) were in households amongst those with lowest 10% of equivalised household incomes (having an annual income of less than £9,701)[4] and a further 33% were in households with annual incomes of at least £9,701 but less than £17,638 (the lowest 11%-30% of household incomes). As noted above, the disproportionate representation of low-income households amongst the cohort reflects the eligibility criteria for government-funded provision of ELC to two-year-olds.

[2] The age range was restricted to limit the number of different versions of the Ages and Stages Questionnaire required for data collection.

[3] Two-year-olds are entitled to statutory funded ELC if they meet various criteria as set out in the Children and Young People Act 2014 and The Provision of Early Learning and Childcare (Specified Children) (Scotland) Order 2014 (SSI 2014/196). Some local authorities provide discretionary funding for some two-year-olds who do not qualify for the statutory entitlement. In this report, "funded ELC" refers to both forms of funding.

[4] Equivalised household income adjusts household income according to the typical income requirements for the number of people in the household. The OECD adjustment has been used in this case, where household income is divided by a household size factor, which is the sum of 0.67 for the first adult in the household, 0.33 for each subsequent adult or child aged 14 or above, and 0.20 for each child aged 13 or below. Cut points for the equivalized income deciles have been taken from a national survey of people in households in Scotland, the Scottish Health Survey 2017.

- The eligibility criteria are also reflected in the deprivation levels of the areas where respondents lived. Almost half (47%) of respondents lived in areas amongst the 20% most deprived in Scotland[5] with the remainder living in less deprived areas.
- Most respondents (96%) were White and the vast majority (91%) spoke only English at home.

Use of ELC

- Sixty-four percent of parents/carers lived within 10 minutes of their child's ELC setting and only 1% said it took 30 minutes or longer to make the trip. Parents living in urban areas were more likely than those living in rural areas to live within 10 minutes of their child's ELC setting (64% compared with 51%)[6].
- Almost all parents (99%) had engaged in at least one activity at their child's ELC setting since the child started. Visiting the child's room (92%) and discussing the child's progress with a member of staff (84%) were most common. Least common were learning a new skill such as cooking (4%) and receiving help with transport to and from the nursery (3%).
- Parents living in the most deprived 20% of areas were more likely than those living in other areas to report having: stayed and played with their child (60% compared with 55%); talked to someone about how to support their child's learning at home (42% compared with 38%); and learned a new skill such as cooking (7% compared with 2%).
- Attending ELC was generally recognised as being more beneficial for children than for parents. Parents were most likely to say the main advantage was that it helped with the child's educational development (58%). Many also mentioned the benefits of socialising with other children (51%). No parent stated there were no advantages to a two-year old child being in nursery.

Child health and development

- Most parents (57%) ranked their child's general health as being 'very good', with 32% reporting it as 'good'. A small proportion (10%) said their child's health was 'fair' and even fewer (1%) said it was 'bad'.
- Thirteen percent of children had a long-term illness and 11% had a long-term limiting illness.
- Thirty-three percent of respondents had concerns about how their child talks and 16% had concerns about what their child understood. In both areas, parents were more likely to be concerned when the child was male.
- Almost all children (99%) had been engaged in some form of home learning activity in the previous seven days. The most common was reciting nursery rhymes or singing songs (64% of children had done this every day). Looking

[5] As measured by the Scottish Index of Multiple Deprivation.

[6] As only a small number of respondents lived in rural areas this finding should be treated with some caution.

at books and reading stories was also very common (50% had done this every day).

- Boys, children from more deprived areas and those in single parent households were slightly less likely to have engaged in any activities and to have done so less frequently in the last seven days than girls, children living in other areas and those in couple households.

Children's keyworkers at ELC settings were asked to complete observations of the child's development using the Ages and Stages (ASQ) and Strengths and Difficulties (SDQ) questionnaires.

The ASQ provides a structured assessment of five developmental domains: communication, gross motor, fine motor, problem-solving and personal-social. It is used to identify children at greater risk of developmental problems. Each domain produces a summary score which can be used to indicate whether the child's development is on schedule, needs monitoring or requires further assessment.

- In all domains other than gross motor, only a minority of children were deemed to have development which was on schedule. This was least likely in relation to problem solving.
- Reflecting commonly found differences by sex on a range of health and developmental measures, across all domains boys were less likely than girls to have development which was deemed to be on schedule. The difference between them was largest in relation to the communication domain where 35% of boys were viewed as having development which was on schedule compared with 58% of girls.
- With the exception of the gross motor domain, children from the most deprived areas were less likely to have development on schedule than those from other areas. This was most stark in the fine motor domain (36% compared with 45%).
- There was a generally close relationship between children's development as measured by the ASQ and their social, emotional and behavioural development as measured by the Strengths and Difficulties Questionnaire (SDQ) scores. Children whose ASQ scores indicated they required further assessment tended to have a higher level of social, emotional and behavioural difficulties (measured via their SDQ total difficulties score). The relationship was particularly close in the communication and personal-social domains. Children with a 'very high' level of difficulties were three times more likely than those with a 'close to average' level of difficulties to have been identified as needing further assessment in relation to communication (62% compared with 20%).

The SDQ is a behavioural screening questionnaire designed for use with children aged between 3 and 16. The questions address five different measures of the child's development: emotional symptoms, conduct problems, hyperactivity, peer relationship problems and pro-social behaviour. The first four measures can be combined into a 'total difficulties' scale. On all scales except pro-social, a higher

score indicates a higher level of difficulties and a developmental status suggesting greater concern. Scores have been banded into four groups indicating increasing levels of difficulties ranging from 'close to average' (children with typical development) through 'slightly raised' and 'high' to 'very high' (children with the highest level of difficulties).

- Most children (70%) had an SDQ total difficulties score in the 'close to average' (43%) or 'slightly raised' (26%) range. However, 14% had a score in the 'high' range and a further 16% in the 'very high' range.
- Children were most likely to score close to average in the emotional symptoms domain (80%) and least likely to do so in relation to peer problems (36%).
- There were no notable differences between boys and girls or by area deprivation in emotional symptoms or conduct problems scores. However, boys were less likely than girls to score close to average and more likely to score very high in relation to hyperactivity and peer problems. In addition, children from more deprived areas were more likely to score very high in these domains than children in other areas. These trends are also reflected in the total difficulties scores.
- Having a close to average SDQ total difficulties score was also associated with: having a parent with some educational qualifications, having a parent with no longstanding illness, average or high parental wellbeing, having a parent who was coping most or all of the time and ever being breastfed.

Parent outcomes

- A third (33%) of respondents reported that they were in work, with 10% working full-time (30 or more hours a week), 21% working part-time, and 2% being on maternity or parental leave from an employer. A further 9% reported that they were out of work and looking for a job, while 70% said they were looking after the home or family, often alongside working.
- Parents living in the most deprived 20% of areas, were slightly less likely to be in work than parents living in other areas (31% compared with 35%), much less likely to be working full-time (5% compared with 16%) and more likely to be working part-time (24% compared with 18%).
- Thirty-six percent of respondents who were in employment or training agreed and 34% disagreed that "If I could afford good quality childcare which was reliable, convenient and affordable, I would work more hours." Those living in the most deprived 20% of areas were more likely than those in less deprived areas to strongly agree (27% compared with 12%).
- Thirty-two percent of parents who were not working agreed and 43% disagreed that "A lack of affordable, convenient, good quality childcare is one of the main reasons I'm not working at the moment." Single parents were more likely than couple parents to agree with this statement.
- Most parents (63%) believed their own health to be good or very good, 28% said it was fair and 9% considered it to be bad or very bad. Parents living in

the most deprived 20% of areas were less likely than those living in other areas to rate their health as good or very good.

- Forty-one percent of all respondents had at least one longstanding illness, including 36% who had a limiting longstanding illness.
- On a life satisfaction scale of 0 to 10, parents in couple families and those with higher qualifications were more likely to score 9 or 10 than single parents and those with lower qualifications. Parental mental wellbeing was higher amongst those living in less deprived areas.
- Fifty-six percent of parents felt they were coping well most or all of the time, 41% felt they were coping only sometimes and only 3% reported that they were not coping very well. There were no notable differences in perceived coping between single and couple parent households nor by area deprivation.
- As a result of having their child in ELC most parents agreed they felt happier (54%), less stressed (61%), that they had more time to themselves (69%) and that they had been able to think about what they may do in the future (68%). A significant minority also agreed it had allowed them to look for work (41%) or undertake study or training (27%).
- Single parents were more likely than parents in couple households to agree that having their child in nursery had allowed them to think about the future (72% compared with 62%). They were also more likely to say they had been able to look for work (44% compared with 38%).

Characteristics of ELC

Reviewers from the Care Inspectorate conducted observations of 146 settings using the Infant / Toddler Environment Rating Scale (ITERS-3). This is a widely recognised and highly regarded instrument designed for use in settings where most children are under 36 months. The ITERS-3 tool was used to provide a snapshot of the everyday experiences of children in their ELC settings and to generate data in order to control for the effect of settings on children's outcomes in the study.

ITERS-3 comprises 33 items across 6 different subscales: space and furnishings; personal care routines; language and books; activities; interaction; and program structure. Settings were scored from 1 to 7 on each item.

- Settings scored highest on the Programme Structure subscale, with 77% of settings scoring 5 or above. Settings also scored higher on the Interaction and Space and Furnishings subscales, with slightly under two-thirds of settings being ranked 5 or above in these areas (64% and 62% respectively).
- On the Personal Care Routines and Language and Books subscales, 48% and 53% of settings scored 5 or above.
- The Activities subscale stands out as an area where many settings were performing less well, with only 6% of settings scoring 5 or above.

It is important to note that the ITERS-3 tool is not the only method of assessing setting quality in Scotland. Indeed, the Care Inspectorate ratings provide a broader measure of the quality of practice and policy within settings that have also been found to be related to children's outcomes in Scotland.

Introduction

Background

This report outlines findings from the surveys and observations conducted as part of the first phase of the Scottish Study of Early Learning and Childcare (SSELC), the research project established to evaluate the expansion of early learning and childcare (ELC) in Scotland.

The ELC Expansion Programme

The current expansion programme follows a commitment from Scottish Government to almost double the hours of funded ELC for all three- and four-year-olds, and eligible two-year-olds, to 1140 per year from August 2020[7]. This increase follows a number of smaller expansions in the past decade. Parents and carers in Scotland have had the opportunity to use funded ELC since 2002: initially 412.5 hours per year which was then increased to 475 hours in 2007. In 2014 the Children and Young People (Scotland) Act 2014 increased funded ELC to 600 hours per year for all three- and four-year-olds and eligible two-year-olds who are looked after, subject of a kinship care order or a guardianship order. Eligibility criteria also incudes two-year-olds who have a parent who is in receipt of one or more qualifying benefits[8].

The expansion to 1140 hours of government-funded ELC provision is intended to support children across Scotland, particularly the most disadvantaged (including eligible two-year-olds). This change seeks to achieve three principal outcomes:

1. To improve children's development, particularly those from the most disadvantaged backgrounds, and to narrow the attainment gap between children from the most and least deprived areas in later years.

2. To enable more parents to have the opportunity to be in work, training or study – again, with a particular focus on benefitting parents in disadvantaged circumstances.

3. To increase family resilience through improved health and wellbeing of parents and children, with a particular focus on families in disadvantaged circumstances.

Local authorities are responsible for implementation and delivery of funded ELC to their local communities. They have flexibility to determine the most appropriate way to phase in the expanded entitlement in their local area as they build capacity.

[7] Scottish Government (2016) A Blueprint for 2020: The Expansion of Early Learning and Childcare in Scotland – Quality Action Plan, Edinburgh: Scottish Government.

[8] More information on the eligibility criteria for two-year-olds is available at: https://www.mygov.scot/childcare-costs-help/funded-early-learning-and-childcare/

The Scottish Study of Early Learning and Childcare

The SSELC has been designed to evaluate whether the ELC expansion programme has achieved the above objectives by measuring outcomes for children and parents receiving the existing entitlement and comparing them to those who receive the increased entitlement. The overarching evaluation questions are based on the Theory of Change set out in the Evaluability Assessment published by NHS Health Scotland in 2017[9]. This Theory of Change is based on the principles of Getting It Right For Every Child (GIRFEC). Existing sources of information and reporting processes – for example National Statistics publications such as the ELC Census and Scottish Household Survey, and Care Inspectorate and Education Scotland inspection data and thematic inspection focus areas – will be used alongside the SSELC to consider the contribution and effectiveness of the ELC programme.

Specifically, the SSELC has the following overarching aims:

- To assess the extent to which the expansion from 600 hours to 1140 hours has improved outcomes particularly for children at risk of disadvantage between the ages of two and five.
- To assess the extent to which the expansion from 600 hours to 1140 hours has closed the gap in child development outcomes between children who are most and least advantaged between the ages of two and five.
- To assess the extent to which the expansion from 600 hours to 1140 hours has improved outcomes for parents, particularly parents of children at risk of disadvantage.
- To assess the extent to which the expansion from 600 hours to 1140 hours has increased family resilience, particularly for families in disadvantaged circumstances[10].
- To provide reliable, longitudinal data that will provide the basis for a Value for Money assessment of the expansion programme.

To evaluate the impact of the expansion programme, the study has been designed to collect data across several phases from 2018 to 2023, with full findings being published in 2024. **Phases 1, 2 and 3** are collecting baseline data on the outcomes of children accessing **600 hours** of funded ELC and their parents:

- **Phase 1** – November 2018
  - Data collected on eligible two-year-olds as they begin ELC
- **Phase 2** – May/June 2019

[9] NHS Health Scotland (2017) Evaluability assessment of the expansion of early learning and childcare: http://www.healthscotland.scot/publications/evaluability-assessment-of-the-expansion-of-early-learning-and-childcare.

[10] Broadly, family resilience in the context of ELC is considered to be a combination of children and parents' health and well-being, and the ability of parents to undertake suitable parenting and activities that may contribute to the long-term prosperity of the family unit.

    - Data collected on four- and five-year-olds as they leave ELC to begin Primary 1
- **Phase 3** – November 2019
    - Follow-up with the same group of eligible two-year-olds after one year in ELC
    - Data collected on three-year-olds as they begin ELC

Phases 4, 5 and 6 will collect data on the outcomes of children accessing **1140 hours** of funded ELC and their parents:

- **Phase 4** – November 2022
    - Data collected on eligible two-year-olds as they begin ELC
- **Phase 5** – May/June 2023
    - Data collected on four- and five-year-olds as they leave ELC to begin Primary 1
- **Phase 6** – November 2023
    - Follow-up with the same group of eligible two-year-olds after one year in ELC
    - Data collected on three-year-olds as they begin ELC

The focus of the initial phase being reported here (Phase 1) was data collection on children aged between two years and two years six months who received 600 hours of funded ELC provision. To be eligible for government-funded provision of ELC when aged two years, children must be in households in receipt of certain state benefits, or be looked after or in care. Local authorities can use their discretion to fund additional places for two-year-olds in situations where the child has additional needs, or the family requires extra support. These criteria mean that most of the children included in the research were from lower income households. Additionally, those children included in the research who were not living in lower income households would be receiving funded ELC either because they are looked after or in care, or through local authorities using their discretion to offer funded or subsidised ELC over and above the legal entitlement to provide support for a wider range of families. At the time of data collection, statutory funding in these settings provided up to 600 hours a year of funded ELC provision.

The aims of Phase 1 were:

- To gather a robust baseline of child outcomes for a cohort of eligible two-year-olds who were receiving 600 hours of funded ELC provision.
- To gather a robust baseline of parent outcomes linked to the above cohort of eligible two-year-olds who were currently receiving 600 hours of funded ELC provision.
- To gather data and evidence on the quality of a sample of ELC settings linked to the above cohort of eligible two-year-olds.

The results from Phase 1 will contribute to a baseline for assessing the impact of expanded ELC provision that will be covered in later phases of the evaluation. Consequently, this report's focus is mainly descriptive; providing a general summary of the data collected and identifying some basic relationships between variables. The report is not intended to provide a detailed consideration of the relationship between use of funded ELC and child or parent outcomes.

During Phase 3 of the evaluation, the children and parents who took part in Phase 1 will be followed up approximately one year after the first data collection exercise – in October/November 2019. This longitudinal element will allow the study to examine the impact of one year of funded ELC on this group of children and their parents. In Phase 3, a second nationally representative group of children of the same age will also be included, to allow a comparison between three-year-old children who received funded ELC provision at age two and those who did not.

The data used in this report cover a wide range of parental and child outcomes. The specific outcomes of interest were:

- Child
    - Social, emotional and behavioural development
    - Cognitive development
    - Physical and mental health and wellbeing
    - Home learning activities
- Parent
    - Uptake of employment, training or study
    - Physical and mental health, and health behaviours
    - Parenting self-efficacy
    - Engagement in their child's learning and development.

With regards to the child, developmental outcomes are presented using data from ELC keyworker observations utilising the Ages and Stages (ASQ) and Strengths and Difficulties (SDQ) Questionnaires[11]. These are age-relevant versions of questionnaires which are used throughout Scotland by Health Visitors to capture information on parental concerns about their young children in relation to development. Parent-report information was also collected on the presence of developmental risk factors – such as sleep patterns and breastfeeding – and on the child's general health and long-term illnesses.

The report also provides baseline data on the characteristics of the ELC provision experienced by the child, using observational data on the quality of the ELC setting. Finally, it explores how parents use their ELC provision presenting information about funding and perceived accessibility as well as details on their use of other forms of childcare.

[11] Further information on these instruments is provided in the relevant section of the report.

By providing the necessary baseline figures for the evaluation of the ELC expansion programme in Scotland, this report is an integral component of the overall research project. Although the results presented here are primarily descriptive, with detailed analysis beyond the scope of the report, these baseline figures will be vital for determining later whether this significant policy programme has delivered the outcomes as intended.

Methods

As noted above, this phase of the SSELC was designed to provide baseline data on several specific child and parent outcomes as well as information about socio-economic characteristics, family and household circumstances, characteristics of childcare use and a range of additional circumstances, experiences and behaviours known to be associated with child outcomes. In addition, observations were made to provide a snapshot of the everyday experiences of children in their ELC settings and to generate data in order to control for the effect of settings on children's outcomes in the study.

The cohort consisted of children aged between two years and two years six months[12] who were eligible for and receiving up to 600 hours of funded ELC provision and their parents. Participants were recruited via ELC settings in 17 local authority areas.

The required size of the sample was determined by observing the difference in ASQ scores on the Communications domain between the least and most deprived two year olds across Scotland. The sample size was calculated on the basis of the ability to measure a closing of this difference. Within those local authorities still offering 600 hours of funded ELC to eligible two-year-old children, a cluster sampling approach was then taken in order to identify the sample. However, as more local authorities than expected had moved on to 1140 hours for their eligible two-year-olds and as some settings did not feel able to take part, the study had to widen its scope and include most settings that met the eligibility criteria in the relevant local authorities. As a result, the achieved sample was not geographically representative of all eligible two-year-old children in Scotland and therefore may be best described as a specific cohort of children rather than as nationally representative, even though there are significant similarities between the two. The data have not been weighted.

Data were gathered on children in the cohort via three methods: a survey of parents/carers; a survey on the children's development undertaken by their ELC keyworkers (using the same cohort of children as the parent/carer survey) and observations of ELC settings attended by sampled children, carried out by Care Inspectorate inspectors (who were acting as observers and not in their regulatory capacity, and using a different tool in their observations than would be used for a formal quality grading).

[12] The age range was restricted to limit the number of different versions of the Ages and Stages Questionnaire required for data collection.

Within participating settings, all children within the specific age range receiving the funded entitlement were eligible for inclusion in the study. Parents were recruited by ELC staff and provided with information about the study before being asked to complete a paper self-administered questionnaire that covered a wide range of information on themselves, their child and their household. Parents were also asked for their permission for the child's keyworker to complete a questionnaire about the child's development. This largely consisted of the Ages and Stages (ASQ) and Strengths and Difficulties (SDQ) Questionnaires[13] but also collected information about the number of hours the child attended the ELC setting in the previous week.

Fieldwork was conducted between October and December 2018. Response rates to the surveys were relatively high. Questionnaires were sent to 190 ELC settings, and at least one questionnaire was returned from 151 of these. Of the other 39, approximately half reported that they had no eligible children. A total of 428 questionnaires were received from parents/carers and 574 from keyworkers. Not all sampled settings provided a figure for the number of eligible children. As such, it is not possible to provide an exact figure for response. However, it is estimated that keyworker questionnaires were returned for 90% of eligible children in the participating settings, and parent/carer questionnaires were returned for 67%.

Nearly all the parent/carer questionnaires (93%) were completed by the child's mother or a female carer within the household, so where the terms "parent" or "parent/carer" are used throughout this report, they refer mostly to the mother or main female carer within the household.

Observations were conducted of 146 participating ELC settings using ITERS-3. This is a widely recognised and highly regarded instrument designed for use in settings where most children are under 36 months (thus being suitable for the cohort of two-year-olds being studied at this phase). It provides an observational measure of the quality of ELC settings for under-threes across 6 subscales: space and furnishings, personal care routines, language and books, activities, interaction, and program structure.

Observations were conducted by Care Inspectorate staff seconded to the study and involved a single visit lasting between two and three hours. It was emphasised to ELC setting managers and staff before and during these observations that they were not formal inspections of the kind routinely undertaken by Care Inspectorate.

One of the primary purposes of the ELC expansion programme in Scotland is to improve child developmental outcomes and to provide more parents with the opportunity to take up work, study or training if they wish to. These are desired outcomes for all parents and children, but especially for those from disadvantaged backgrounds. Where there are identifiable and interesting relationships between variables such as area deprivation and child or parental outcomes, these are outlined as far as possible in the report. Additional analysis of subgroups is included in the separate annex tables (see Appendix B).

[13] Further information on these instruments is provided in the relevant section of the report.

Child, parent and household characteristics

Characteristics of the cohort

A little over half (53%) of those responding to the parent survey were single parents, while 47% lived in two parent households. The vast majority of children (91%) lived with at least one birth parent whilst 9% were looked after by a grandparent, foster parent or other carer (e.g. other relative). Twenty-eight percent of respondents had only one child aged under 16 living in the household (that is, the two-year-old child receiving the funded ELC provision was the only child in the household), while 39% had two children and 33% had three or more children aged under 16 living with them.

Half (49%) of the respondents to the parent survey were in households amongst those with lowest 10% (decile) of equivalised household incomes (having an annual income of less than £9701)[14]. A further 20% of respondents were in households with incomes in the second lowest decile (an annual income of at least £9701 but less than £13,929) and 13% had incomes in the third lowest decile (an annual income of at least £13,929 but less than £17,638). The remaining 19% of respondents lived in households with incomes in the 4th to 9th deciles. The disproportionate representation of lower income households amongst the cohort reflects the eligibility criteria for access to statutory funded provision of ELC for two-year-olds. These are households that are more likely to have a parent or carer in receipt of certain qualifying benefits (out of work benefits or income related benefits). Eligibility criteria for the two-year-old entitlement also includes looked after, kinship care or a child with an appointed guardian. The 19% of children who were living in households with incomes in the 4th to 9th deciles were likely to be receiving statutory funded ELC either because they are looked after or in care, or through local councils using their discretion to offer funded or subsidised ELC over and above the legal entitlement to provide support for a wider range of families.

The eligibility criteria are also reflected in the deprivation levels of the areas where respondents lived. Almost half (47%) of respondents lived in areas amongst the 20% most deprived in Scotland[15] with the remainder living in less deprived areas.

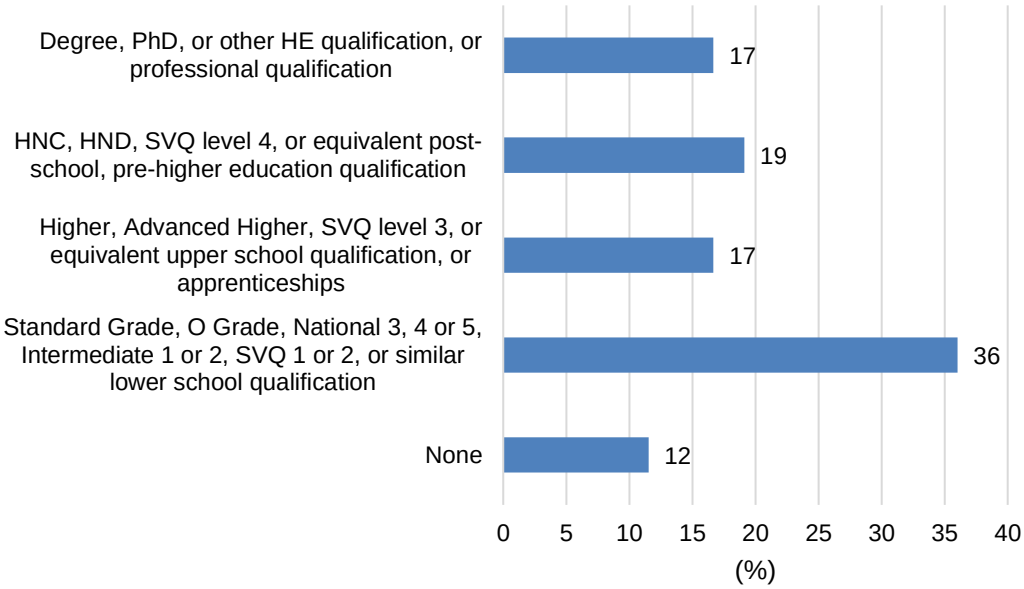
Figure 1 provides details of levels of education amongst parent respondents. As the graph shows, 17% had degree level qualifications and a further 19% had other post-school qualifications; 17% had Highers, Advanced Highers or equivalent, and 36% had Standard Grades or equivalent as their highest level of educational qualification. The remaining 12% had no formal qualifications. As would be expected, respondents living in higher income households (4th to 9th deciles) were

[14] Equivalised household income adjusts household income according to the typical income requirements for the number of people in the household. The OECD adjustment has been used in this case, where household income is divided by a household size factor, which is the sum of 0.67 for the first adult in the household, 0.33 for each subsequent adult or child aged 14 or above, and 0.20 for each child aged 13 or below. Cut points for the equivalized income deciles have been taken from a national survey of people in households in Scotland, the Scottish Health Survey 2017.

[15] As measured by the Scottish Index of Multiple Deprivation.

more likely to have degree level qualifications. These figures suggest the cohort has lower levels of educational qualifications than parents of two-year-olds generally. For example, data from the Growing Up in Scotland study indicates that 42% of Scottish children aged 2-3 in 2013 lived with a parent who was degree-educated and only 5% had parents with no qualifications[16].

Figure 1: Highest level of education of respondent



Base: All respondents (parent survey)

Most respondents were white: 85% identified themselves as White Scottish, 7% as White Other British and 4% as Other White ethnicity. Just 4% were from a non-White background. This is broadly reflective of the Scottish population – for example, the 2011 census found 4% of the Scottish population to be from minority ethnic groups[17].

The vast majority of parents (91%) spoke only English at home, while 7% spoke English and other languages and 2% spoke only another language.

[16] Bradshaw, P., Knudsen, L. and Mabelis, J. (2015) Growing Up in Scotland: *The circumstances and experiences of 3-year-old children living in Scotland in 2007/08 and 2013,* Edinburgh: Scottish Government.

[17] Source: https://www.scotlandscensus.gov.uk/ethnicity-identity-language-and-religion.

Use of ELC

Funding, hours attended & accessibility

The parent questionnaire asked about ELC funding and accessibility of childcare. The keyworker questionnaire gathered related information on funded registered hours per week and hours the child attended in the last week.

The full costs of ELC at the setting included in the survey were met for 93% of parents. The remaining 7% paid for some additional hours over and above the 600 hours of funded ELC. A little over three quarters of children had their costs funded through their statutory entitlement (78%), with the remainder being funded through discretionary funding from their local authority. A very small proportion (less than 1%) received some funding from both sources. On average, children were registered for 13.8 hours of funded ELC per week. There was no notable difference in average funded hours taken up by children living in more and less deprived areas. However, some differences were evident in the average hours registered for children funded through their statutory entitlement and those receiving discretionary funding from their local authority, with children funded through their statutory entitlement having slightly longer registered hours on average than those funded through discretionary funding from their local authority (14.2 hours compared with 12.2 hours).

Two-thirds of parents/carers (64%) lived close enough to the ELC setting that a one-way trip from their home to the setting would take less than 10 minutes, while only 1% took 30 minutes or longer to make the trip (Table 1).

Table 1: Average duration of a one-trip journey from home to the setting

	All
	%
0 to 5 minutes	36
6 to 10 minutes	27
11 to 15 minutes	18
16 to 20 minutes	11
21 to 30 minutes	6
More than 30 minutes	1
Unweighted base	*414*
Base: All respondents (parent survey)	

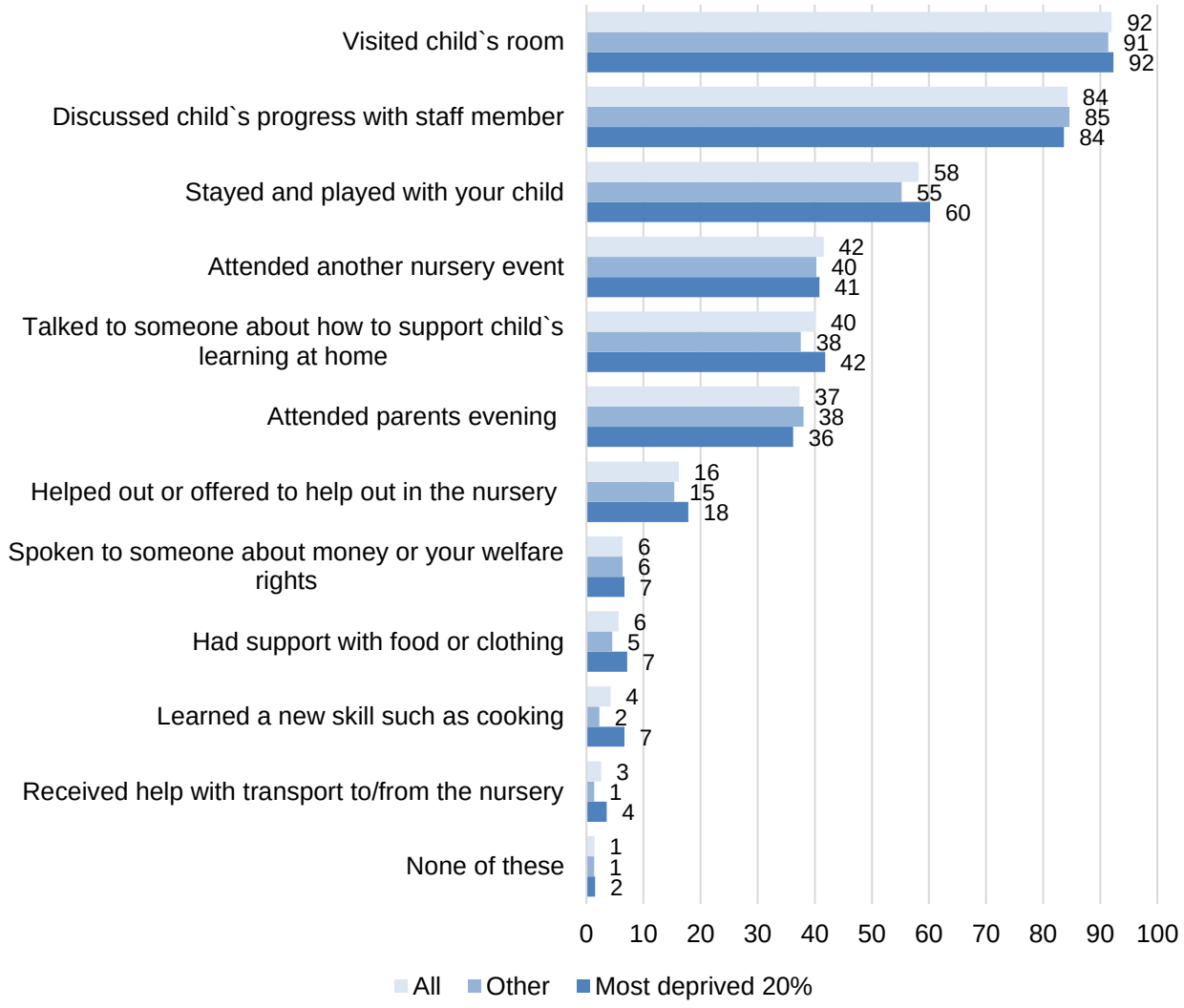
There were no notable differences in accessibility according to area deprivation (see Table B1 in Appendix B). Some differences were apparent according to urban/rural characteristics with parents living in urban areas more likely than those

living in rural areas to live within 10 minutes of their child's ELC setting (64% compared with 51%)[18].

Engagement with ELC setting

Parents were asked whether they had engaged in any of a range of 11 activities at their child's ELC setting since the child had started attending. The activities ranged from visiting the child's room or attending a parent's evening to speaking to someone about money/welfare rights or learning a new skill such as cooking. As shown in Figure 2, almost all parents (99%) had engaged in at least one of the activities listed. The most common activities were visiting the child's room (92%) and discussing the child's progress with a member of staff (84%). Least common were activities such as learning a new skill (4%) and receiving help with transport to and from the nursery (3%).

Figure 2: Activities parent participated in at child's nursery by area deprivation



Base: All respondents (parent survey)

[18] As only a small number of respondents lived in rural areas this finding should be treated with some caution.

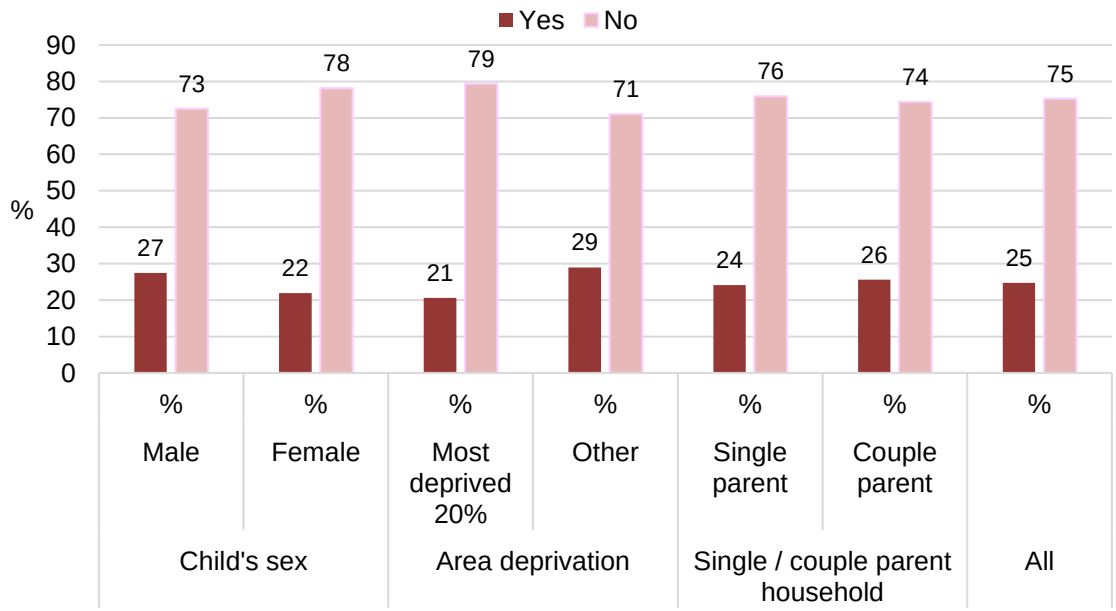
As the graph also shows, there were some small notable differences in the experiences of parents from more and less deprived areas. Parents living in the most deprived 20% of areas were more likely than those living in other areas to report having stayed and played with their child (60% compared with 55%); talked to someone about how to support their child's learning at home (42% compared with 38%) and to have learned a new skill such as cooking (7% compared with 2%).

Some variations in engagement are also notable according to parental level of education (see Table B2 in Appendix B). In general, parents whose highest qualification was Higher/Advanced Higher Grade or equivalent were more likely than parents with other qualification levels (both lower and higher) to have undertaken any activity at their child's nursery. For example, 66% said they had stayed and played with their child compared with 55% of parents with degree level qualifications and 50% of parents with no qualifications. Parents with no qualifications were less likely than those with any qualifications to have attended a parents evening (24% compared with 34% of those with up to National 5s or equivalent) or another type of nursery event (28% compared with 39% of those with up to National 5s or equivalent). However, parents with no qualifications were not consistently less likely to engage in all activities.

Use of other childcare & advantages of child being in nursery

A quarter (25%) of respondents were getting help with childcare on a regular basis from another provider (for example, another nursery, a childminder, or informal care from family or friends). Parents in the most deprived 20% of areas were less likely to do this than those living in less deprived areas, single parent families were less likely to rely on other providers than two parent families and parents of male children were more likely do this than parents of female children. The full breakdown of responses is summarised in Figure 3.

Figure 3: Whether respondent is using other childcare by child's sex, area deprivation and household type



Base: All respondents (parent survey)

Of the different options available for other childcare (Table 2), the most popular was grandparents (13%) followed by another local authority nursery (4%) and a private or workplace nursery (3%). Table 2 summarises the total results for the other type of childcare used. The majority (77%) of respondents did not use other types of childcare, 15% used one other childcare provider and 8% used two or more. Amongst those who used other childcare providers, on average they did so for 19.4 hours a week. This varied by area deprivation with parents in the 20% most deprived areas reporting higher average weekly hours of additional childcare than those living in other areas (23 compared with 17.5). Parents using 'unfunded'[19] additional hours did so for an average of 18 hours per week.

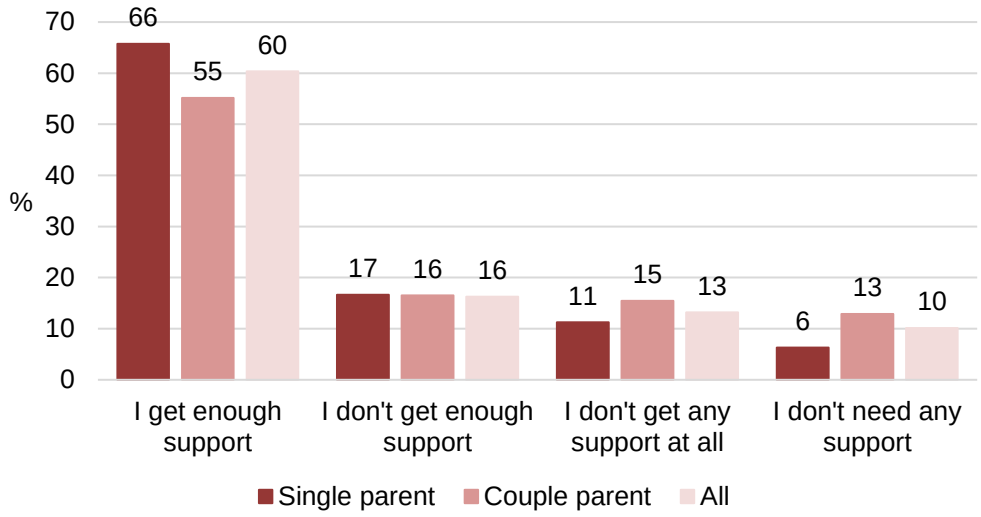
Table 2: Other types of childcare used

	All
	%
None	77
Grandparents	13
Local authority nursery (other than this one)	4
Ex-spouse	4
Private or workplace nursery	3
Childminder	3
Another relative	2
Community or voluntary nursery	1
Unweighted base	*424*
Base: All respondents (parent survey)	

Parents/carers were also asked how they felt about the amount of support they received with childcare from family or friends living outside the household (Figure 4). Most respondents (60%) felt that they received enough support, with more single parents (66%) stating this was the case than those living in two parent households (56%). However, 16% of parents/carers felt they didn't get enough support and 13% said they got no support at all.

[19] Unfunded hours are those where the parent was paying themselves, someone else was paying (but not the government or the local authority) or there was no fee (such as where the carer was the child's grandparent).

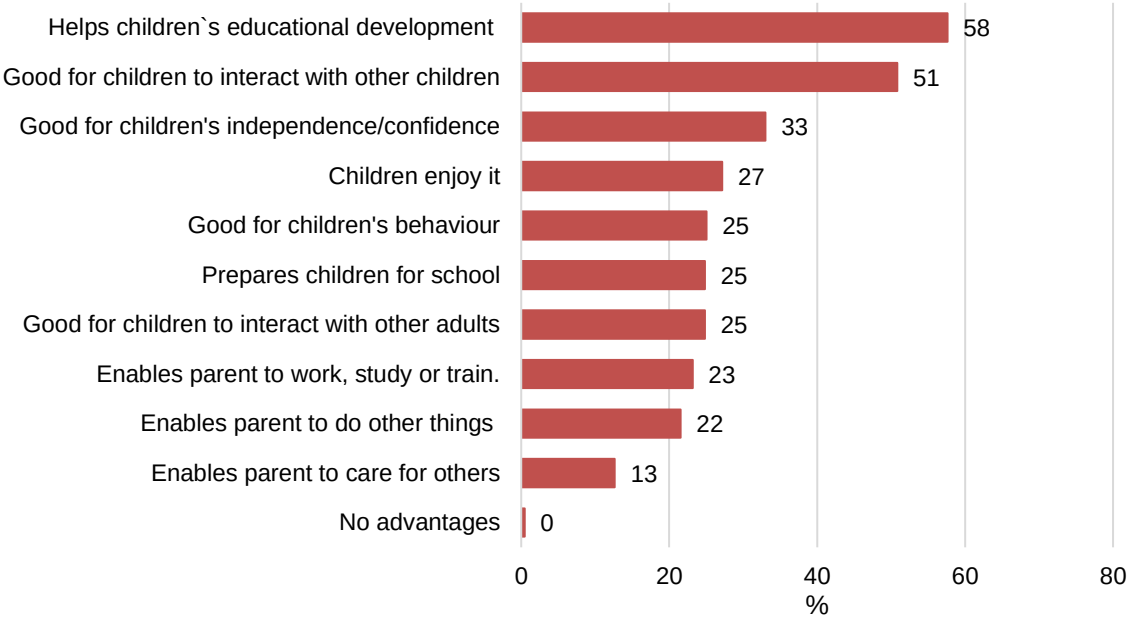
Figure 4: Respondents' feelings about amount of support received with childcare from family or friends living outside the household by single/couple parent household



Base: All respondents (parent survey)

Finally, parents were asked what the main advantage was when their two-year-old child attends a pre-school or nursery for around 15 hours per week. These responses are summarised in Figure 5[20]. As the graph shows, nursery placements for two-year-olds were recognised as being generally more beneficial for children than for parents. That a placement helped with the child's educational development was the most popular response with 58% of parents selecting it. No parent stated there were no advantages to a two-year old child being in nursery.

Figure 5: Main advantages of child being in nursery



Base: All respondents (parent survey)

[20] Note that whilst respondents were asked to choose only one response, many selected multiple responses. As such, the proportions do not equal 100%.

Child health and development

Assessments of development

Children's keyworkers at ELC settings were asked to complete observations of the child's development using the Ages and Stages (ASQ) and Strengths and Difficulties (SDQ) questionnaires. Both the ASQ and SDQ are widely used by Health Visitors across Scotland as part of their health reviews of pre-school children – the Scottish Child Health Programme[21]. These particular instruments were also selected for inclusion in the Child Health Programme following an extensive review by academics and practitioners[22].

The ASQ provides a structured assessment of a range of developmental domains, usually using a parental questionnaire supported by observation of the child at play to identify children at increased risk of developmental problems. There are 30 items split into five different domains: communication, gross motor, fine motor, problem-solving and personal-social. By answering 'yes', 'sometimes' or 'no', the respondent indicates whether or not the child can complete the action or provide the response required. Each domain produces a summary score which can be used to indicate whether the child's development is on schedule, needs monitoring or requires further assessment. Whilst it is designed to be completed by parents, because it is informed by observation of the child it was deemed suitable for completion by the child's keyworker at their ELC setting.

The SDQ is a commonly used behavioural screening questionnaire designed for use with children aged between three and 16. It consists of 25 questions about a child's behaviour to which the respondent can answer 'not true', 'somewhat true' or 'certainly true'. Responses can be combined to form five different measures of the child's development, namely emotional symptoms (e.g. excessive worrying), conduct problems (e.g. often fighting with other children), hyperactivity/inattention (for example, constantly fidgeting), peer relationship problems (e.g. not having close friends), and pro-social behaviour (e.g. being kind to others). Furthermore, the first four measures can be combined into a 'total difficulties' scale. Higher scores imply greater evidence of difficulties on each of the scales, with the exception of the pro-social behaviour scale where the reverse is true. In this report, recommended banded versions of the scales have been used to create the following categories: 'close to average', 'slightly raised', 'high' and 'very high', with 'very high' indicating multiple problems identified.

Ages and Stages Questionnaire

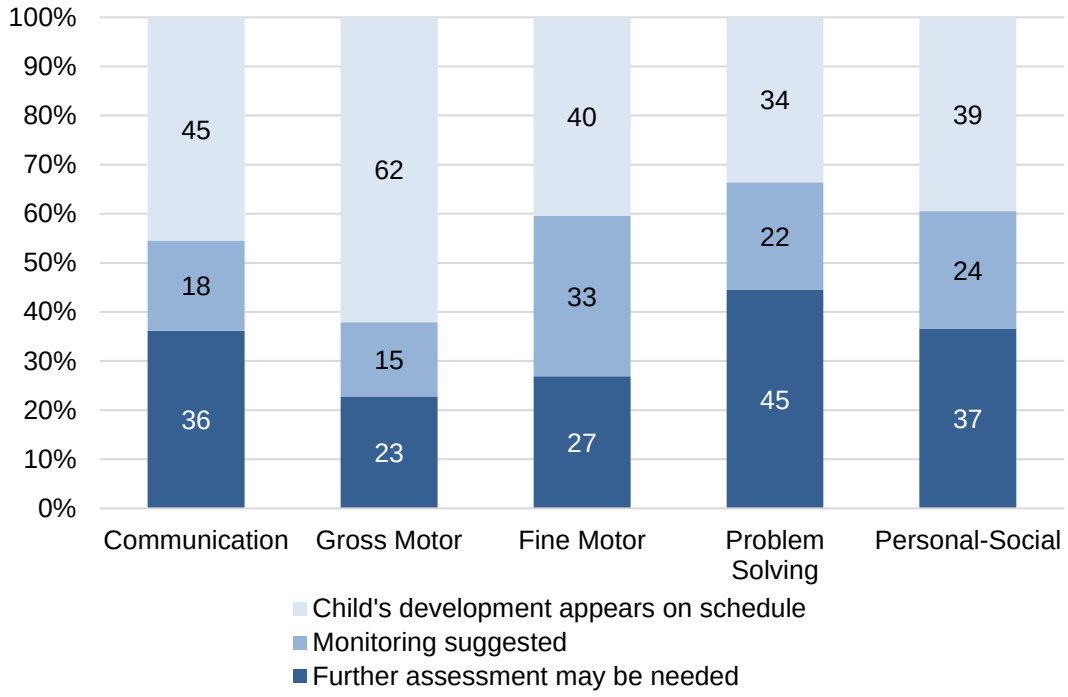
Figure 6 provides details of the proportion of children who were deemed to have development on schedule, needing monitoring or requiring further assessment for

[21] Scottish Government (2012) *The Scottish Child Health Programme: Guidance on the 27-30 month child health review*, Edinburgh: Scottish Government

[22] Bedford, H., Walton, S., Ahn, J. (2013) *Measures of Child Development: A review*, London: Centre for Paediatric Epidemiology and Biostatistics, UCL Institute of Child Health.

each of the ASQ domains. Children were most likely to be on schedule in relation to gross motor development and least likely in relation to problem solving.

Figure 6: ASQ scores by domain

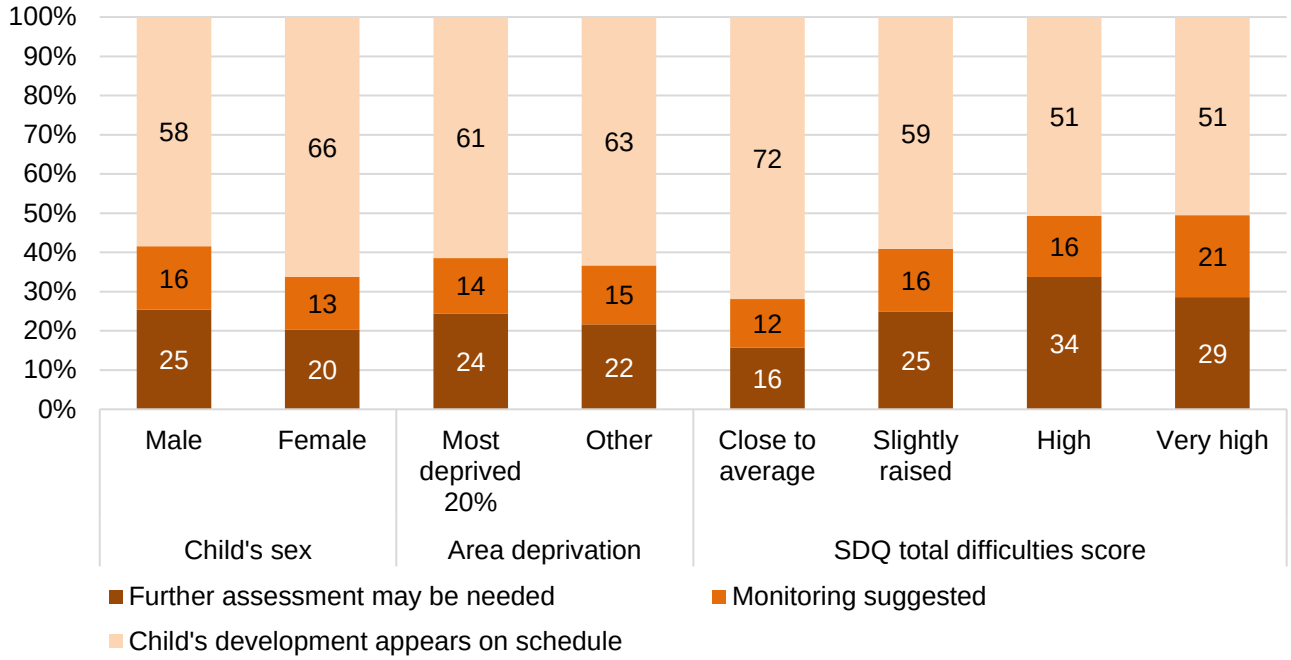


Base: All children (keyworker observations)

Figure 7 breaks down scores in the gross motor domain by the child's sex, area deprivation and SDQ total difficulties score. Reflecting commonly found differences by sex on a range of health and developmental measures[23], girls were more likely than boys to be viewed as having development which was on schedule (66% compared with 58%), though the difference was narrower than in some other domains. There was little notable difference in gross motor development according to area deprivation but some differences were evident according to SDQ total difficulties score. Those children with higher difficulties were generally more likely than those with lower difficulties to have gross motor development deemed as requiring further assessment. However, the relationship was not fully linear (i.e. the proportion of children identified as requiring further assessment did not consistently increase as the total difficulties score increased) and it was weaker than with communication domain scores.

[23] For example, initial ASQ-3 data from NHS Digital's and Ofsted's Children and Young People's Health Services Data on children aged 2-2½ indicates that fewer males (86%) than females (93%) had scores indicating their development was on schedule: https://files.digital.nhs.uk/pdf/o/n/cyphs-asq-oct16-mar17-exp-rep.pdf

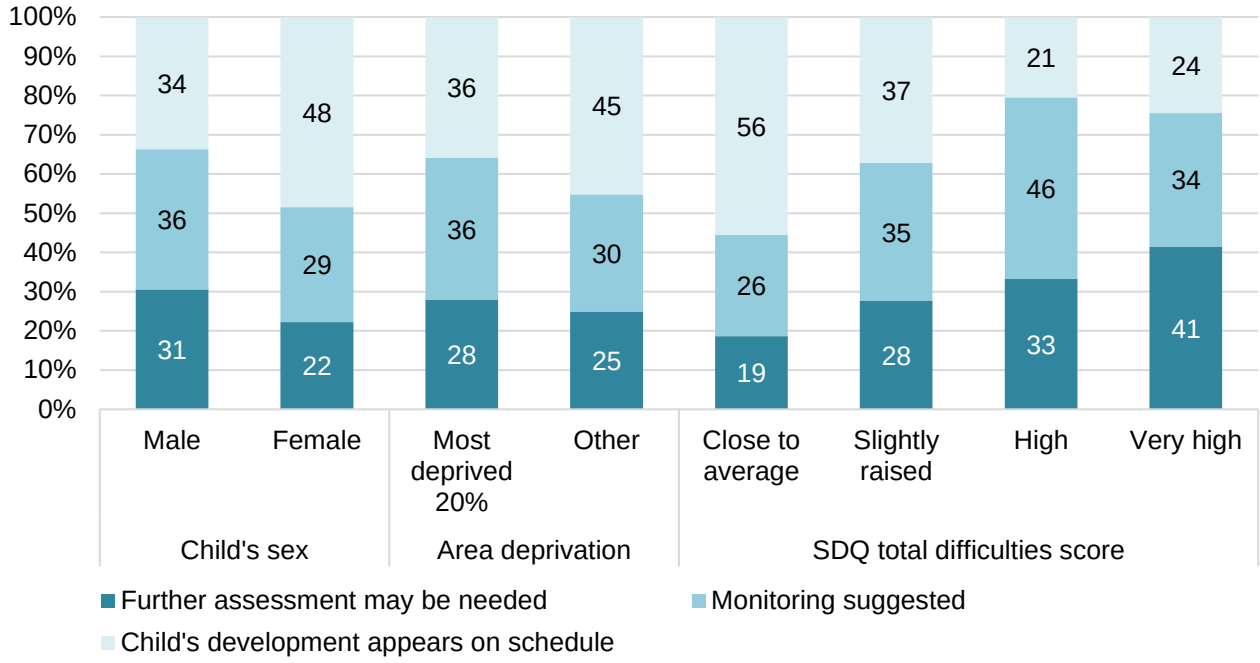
Figure 7: ASQ gross motor domain score by child's sex, area deprivation and SDQ total difficulties score



Base: All children (keyworker observations)

In relation to fine motor development, as shown in Figure 8, boys (34%) were again less likely to be on schedule than girls (48%). Children living in the most deprived 20% of areas were less likely than those living in other areas to be on schedule (36% compared with 45%) though most of this difference was in the proportion of children for whom monitoring was suggested (36% compared with 30%) rather than further assessment being needed (28% compared with 25%). As SDQ total difficulties score increased, the proportion of children deemed as needing further assessment in relation to their fine motor development also increased. Around one in five (19%) children with a close to average SDQ score were identified as needing further assessment compared with two in five children (41%) with a very high SDQ score.

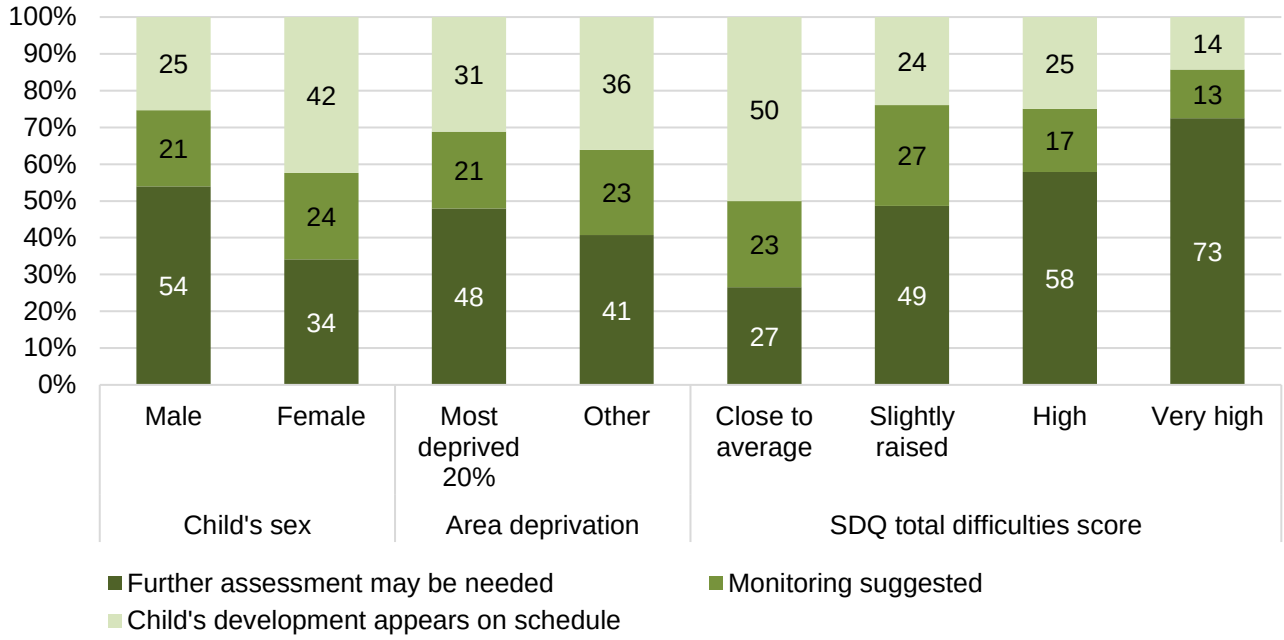
Figure 8: ASQ fine motor domain score by child's sex, area deprivation and SDQ total difficulties score



Base: All children (keyworker observations)

In the problem-solving domain (Figure 9), boys (25%) were almost half as likely to be on schedule as girls (42%). Differences were also notable by area deprivation with children living in the most deprived 20% of areas less likely than those in less deprived areas to have development on schedule (31% compared with 36%) and more likely to be deemed as needing further assessment (48% compared with 41%). Those children who had a high total difficulties score on the SDQ were also notably more likely to be identified as requiring further assessment in relation to ASQ problem-solving. As the graph shows, 27% of children with a 'close to average' SDQ total difficulties score were deemed to potentially require further assessment in relation to ASQ problem-solving compared with 73% of children with a 'very high' total difficulties score.

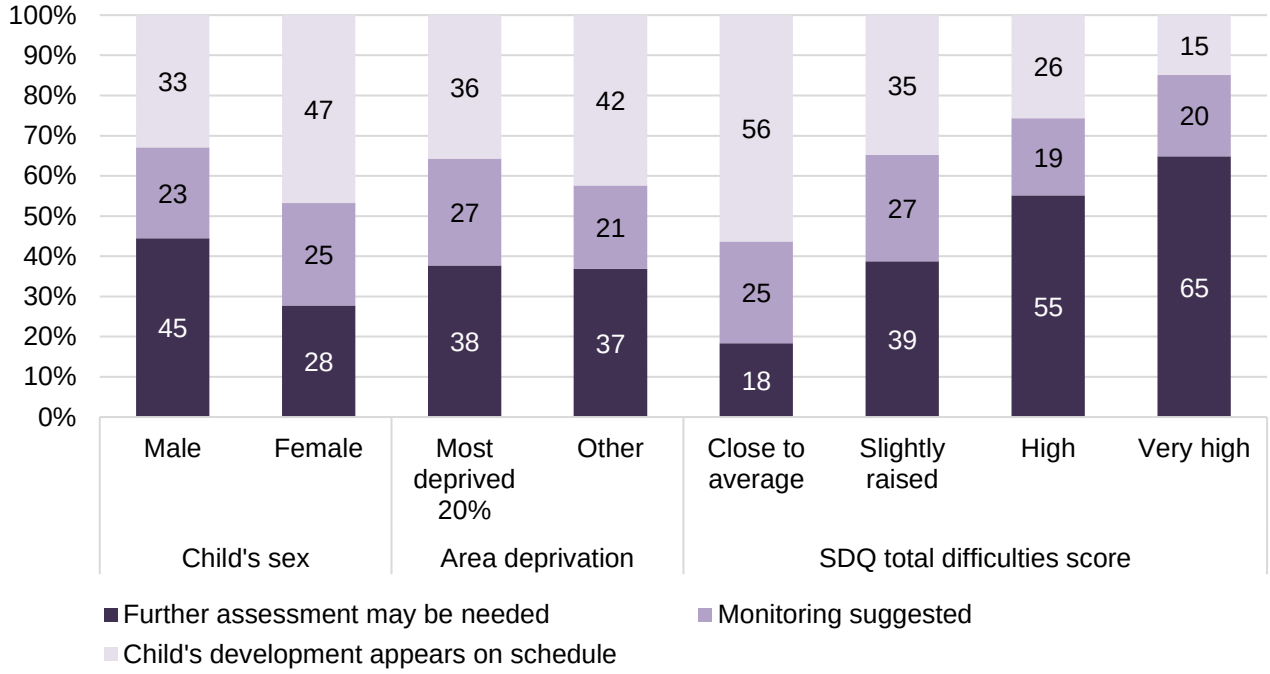
Figure 9: ASQ problem-solving domain score by child's sex, area deprivation and SDQ total difficulties score



Base: All children (keyworker observations)

In the personal-social domain (Figure 10), girls were more frequently deemed to be on schedule (47%) than boys (33%). Children living in the most deprived 20% of areas were less likely than those living in other areas to be on schedule (36% compared with 42%) and more likely to require monitoring (27% compared with 21%).

Figure 10: ASQ personal-social domain score by child's sex, area deprivation and SDQ total difficulties score

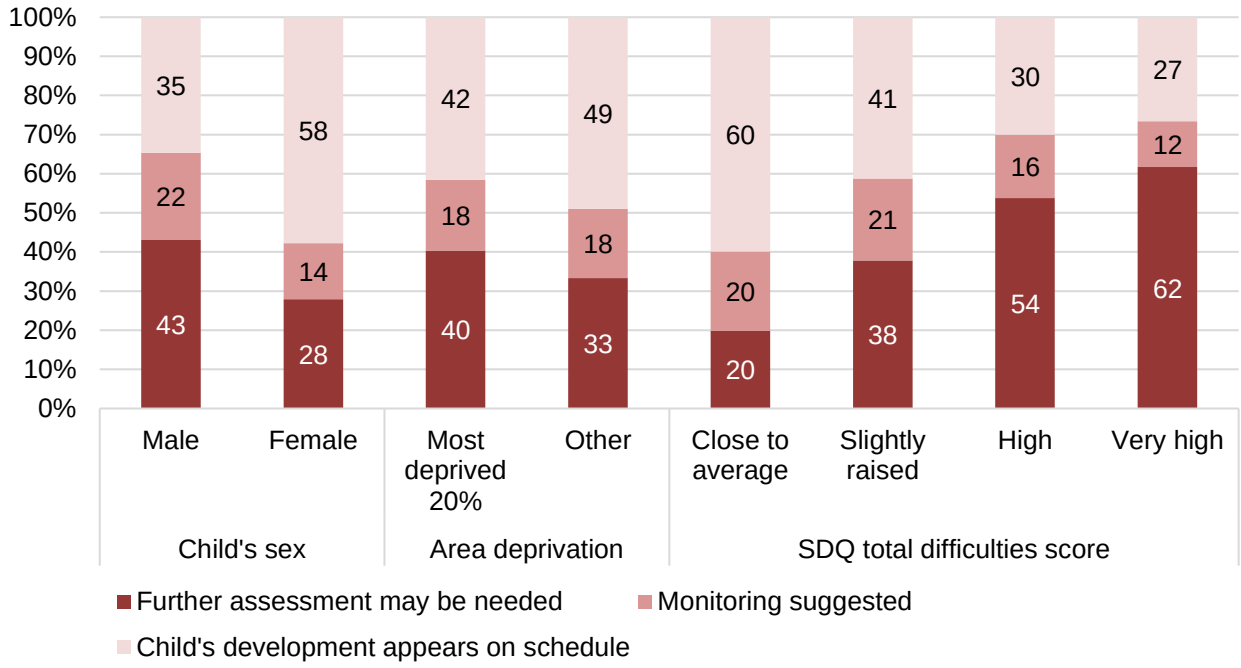


Base: All children (keyworker observations)

The relationship between ASQ personal-social scores and SDQ total difficulties scores was very strong. Children with a very high SDQ score were over three times as likely as those with a close to average score to be deemed as requiring further assessment.

Scores in the communication domain are broken down by the child's sex, area deprivation and SDQ total difficulties score in Figure 11. As in other domains, boys were more likely than girls to be identified as requiring further assessment (43% compared with 28%) and children living in the most deprived 20% of areas were more likely than those living in less deprived areas to be considered as requiring further assessment. There was a very strong relationship between ASQ communication scores and SDQ total difficulties scores. Children with a very high SDQ total difficulties score were three times more likely than those with a close to average total difficulties score to have been identified as needing further assessment in relation to communication (62% compared with 20%).

Figure 11: ASQ communication domain score by child's sex, area deprivation and SDQ total difficulties score

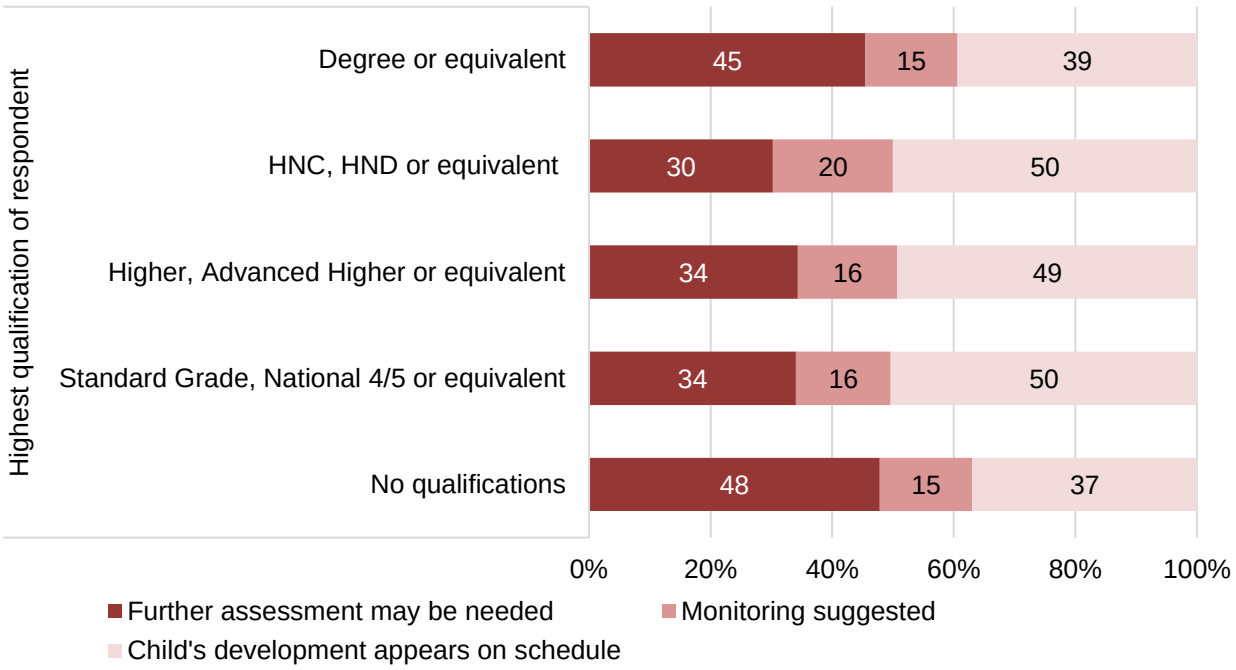


Base: All children (keyworker observations)

Additional analysis was undertaken to explore differences in ASQ communication domain scores by a range of parent and family characteristics. Results for children whose parents had no qualifications or degree level qualifications were similar (Figure 12). Compared to those whose parents had qualifications below degree level, children in these groups were less likely to have development on schedule and more likely to be identified as needing further assessment. For example, 45% of children whose parents had a degree level qualification were considered to require further assessment compared with 34% of children whose parents had a qualification at Standard Grade or National 4/5 level. This may be related to the fact that children with degree-educated parents are more likely than those whose parents have lower qualifications to also be in higher income households and would

therefore be receiving funded ELC due to specific support needs identified for the child or their parent. Children from couple families were less likely than those in single parent families to have development that was on schedule (41% compared with 50%) and more likely to be deemed as needing further assessment (41% compared with 34%).

Figure 12: ASQ communication domain score by parent's level of education

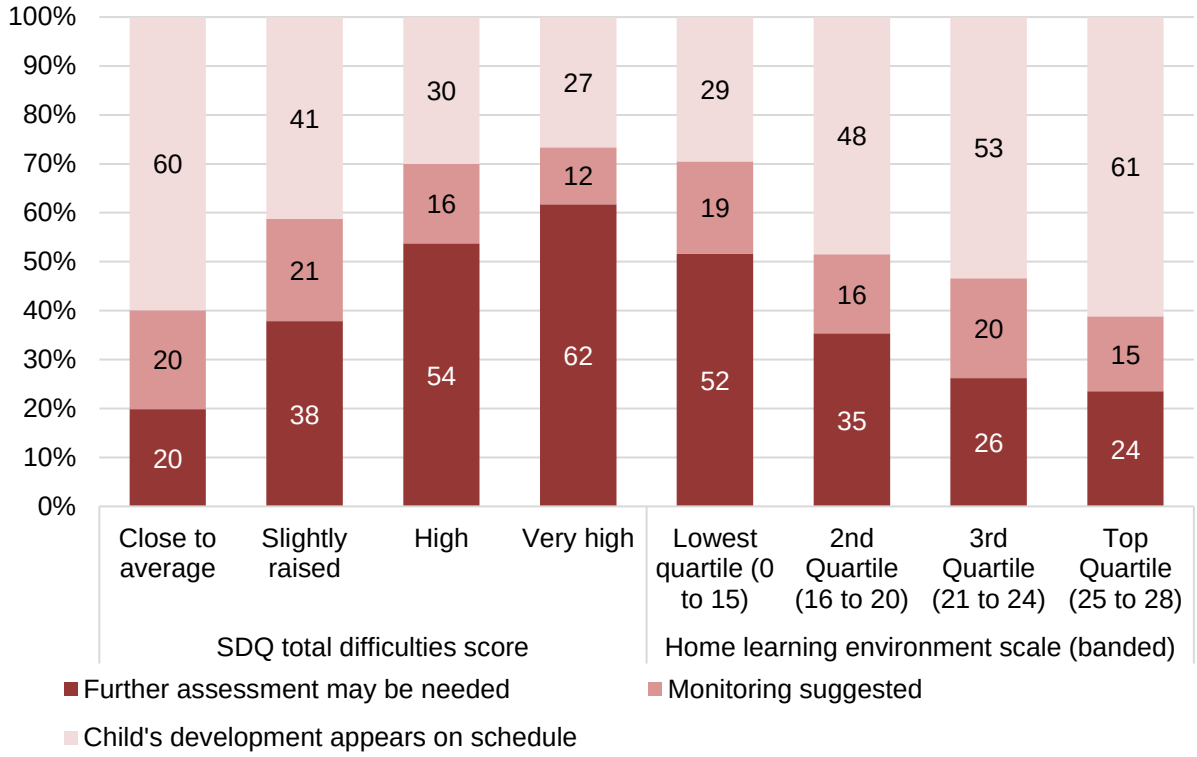


Base: All children (keyworker observations)

There were no notable differences in children's ASQ communication domain scores according to whether or not their parent had a longstanding illness or their level of parental self-efficacy. Some differences were evident according to parental mental wellbeing but the relationship between the two variables is not strong. Whilst children whose parents had high mental wellbeing were less likely than those with low mental wellbeing to have development on schedule (32% compared with 47%) they were similarly likely to be considered as needing further assessment (42% compared with 40%).

There was some variation in ASQ communication scores by children's sleeping patterns and whether they were ever breastfed but there was no overall pattern (see Table B3 in Appendix B). In contrast, much stronger relationships were observed by frequency of home learning activities and SDQ total difficulties score (Figure 13). Children who experienced lower levels of home learning activities and those who had higher SDQ total difficulties scores were significantly more likely than children with higher levels of activities and those with lower SDQ total difficulties scores to have development deemed as requiring further assessment. For example, 62% of children whose total difficulties score was in the very high range had development identified as needing further assessment compared with 20% of children whose total difficulties score was in the close to average range.

Figure 13: ASQ communication domain score by SDQ total difficulties score and home learning environment score

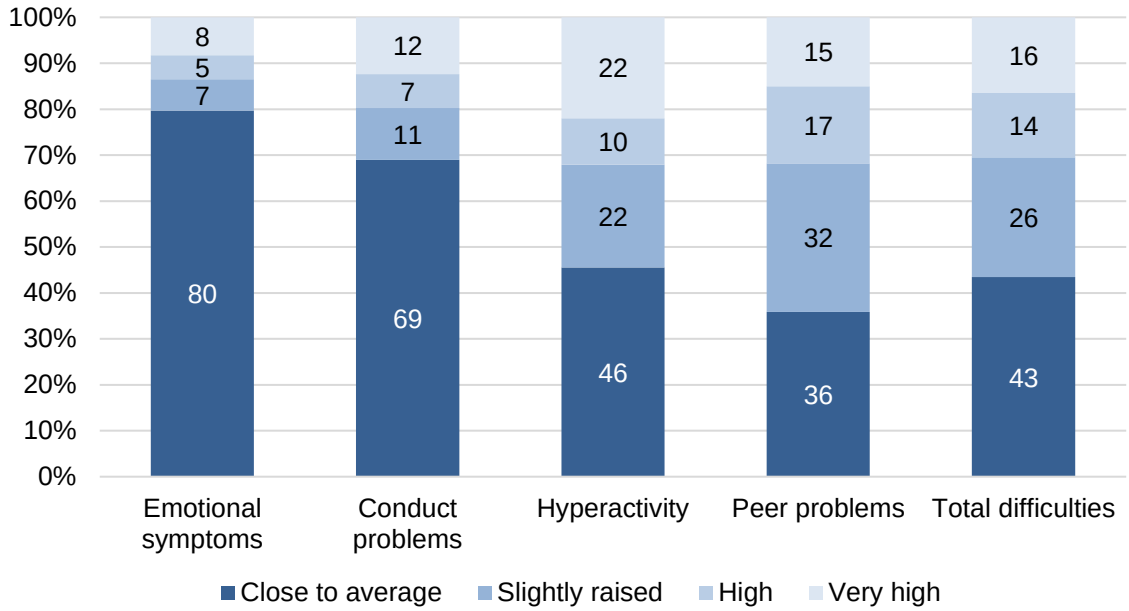


Base: All children (keyworker observations)

Strengths and Difficulties Questionnaire

As shown in Figure 14, most children (70%) had an SDQ total difficulties score in the ‘close to average’ (43%) or ‘slightly raised’ (26%) range. However, 14% had a score in the ‘high’ range and a further 16% in the ‘very high’ range. These rates vary across each of the difficulties domains. As the graph shows, children were most likely to score close to average in the emotional symptoms domain (80%) and least likely to do so in relation to peer problems (36%). They were most likely to score very high in the hyperactivity domain (22%) and least likely for emotional symptoms.

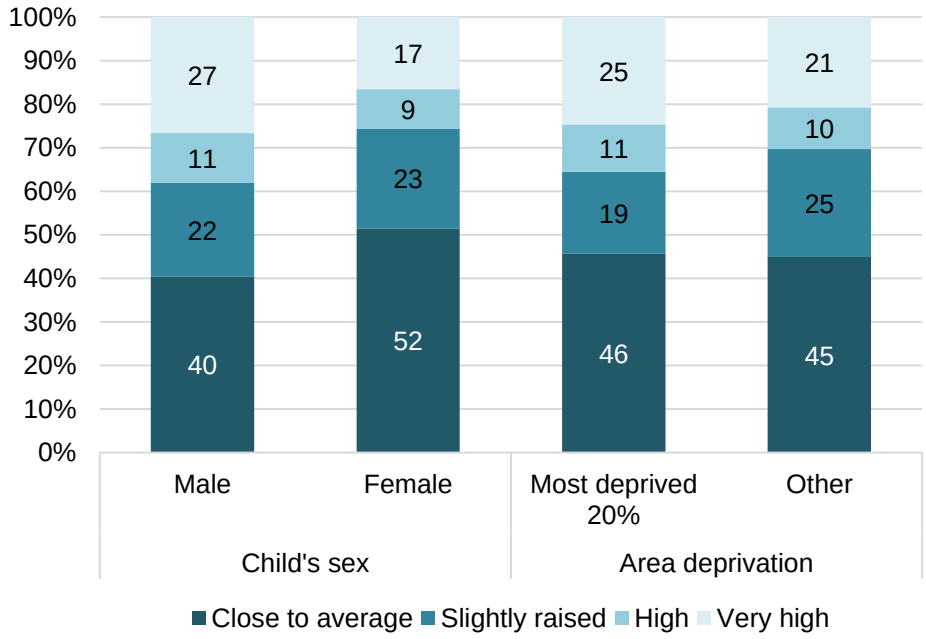
Figure 14: SDQ scores by domain



Base: All children (keyworker observations)

In relation to emotional symptoms and conduct problems, there were no notable differences between boys and girls or by area deprivation (see Tables B4 and B5 in Appendix B). Boys and girls differed more in relation to hyperactivity (Figure 15) and peer problems (Figure 16). For both, boys were less likely to score close to average and more likely to score very high. For example, 27% of boys scored very high on SDQ hyperactivity compared with 17% of girls.

Figure 15: SDQ hyperactivity score by child's sex and area deprivation

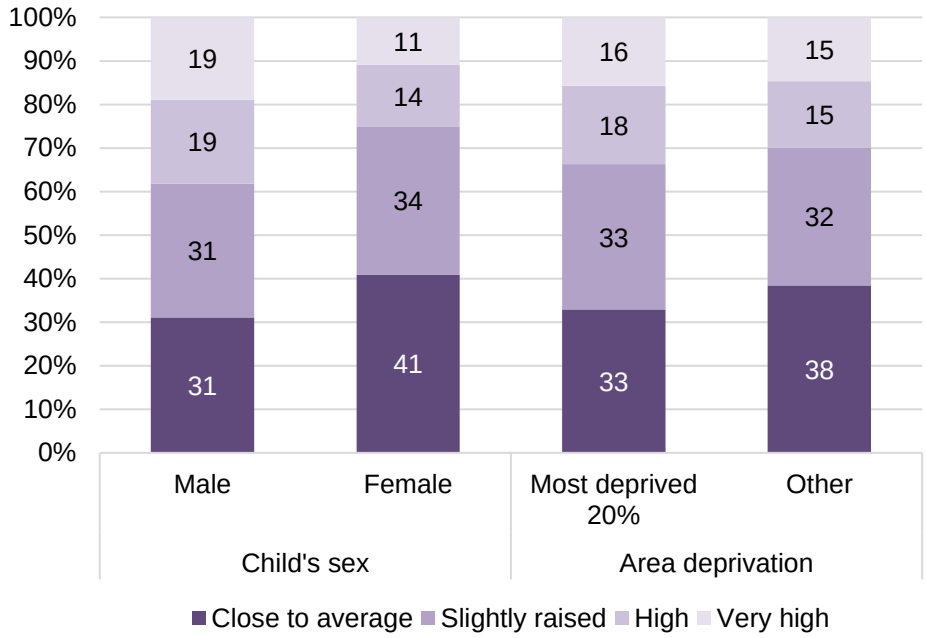


Base: All children (keyworker observations)

Differences by area deprivation were less consistent. On hyperactivity, children from more and less deprived areas were similarly likely to have close to average

scores. However, children living in the most deprived 20% of areas were a little more likely than those living in other areas to have very high hyperactivity scores (25% compared with 21%). On the peer problems domain, children living in the most deprived 20% of areas were less likely than children living in other areas to have close to average scores (33% compared with 38%) and more likely to have a high or very high score (34% compared with 30%).

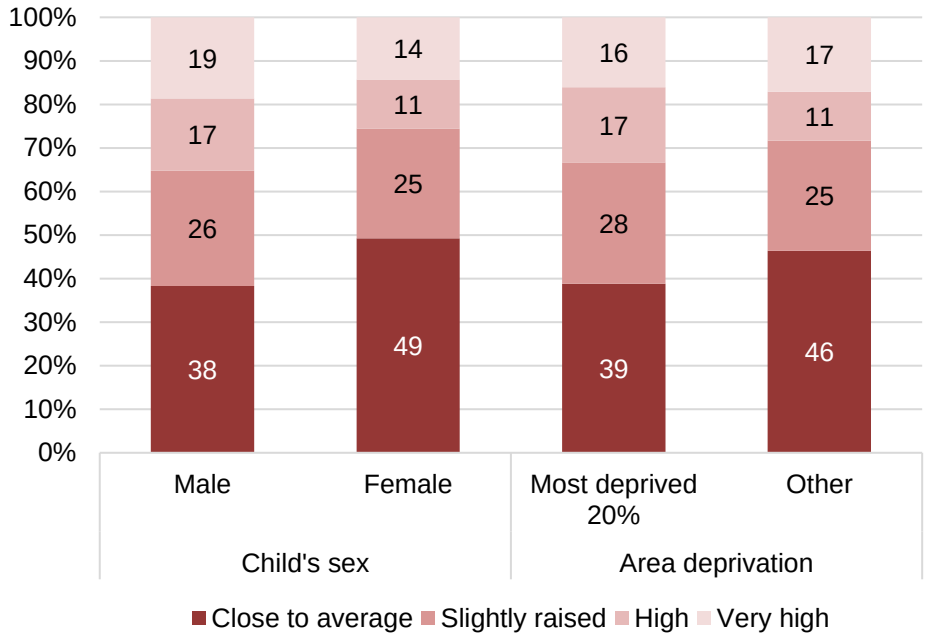
Figure 16: SDQ peer problems score by child's sex and area deprivation



Base: All children (keyworker observations)

These trends are also reflected in the total difficulties scores as shown in Figure 17. Boys were less likely than girls to have a close to average score (38% compared with 49%) and more likely to have a high or very high score (36% compared with 25%). Similarly, children living in the most deprived 20% of areas were less likely than children in other areas to have a close to average score (39% compared with 46%) and more likely to have a high or very high score (33% compared with 28%).

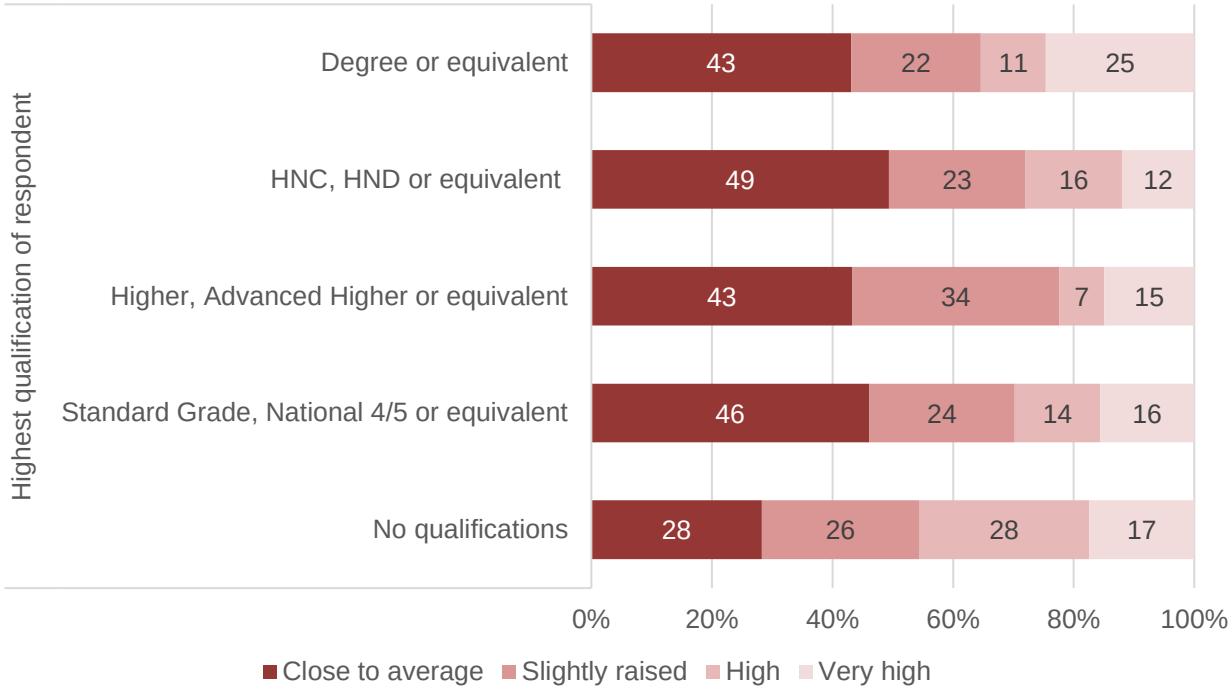
Figure 17: SDQ total difficulties score by child's sex and area deprivation



Base: All children (keyworker observations)

Parental education level was associated with children's SDQ total difficulties score (Figure 18). In cases where parents had no qualifications, children were less likely than those where parents had any qualifications to have close to average scores and more likely to have high, but not 'very high', scores. For example, 28% of children whose parents had no qualifications had a close to average score compared with 43% of children whose parents had a degree-level qualification. Results amongst those with different types of qualifications were generally similar and there was no obvious trend by level of qualification. There were no notable differences between children in single parent and couple households.

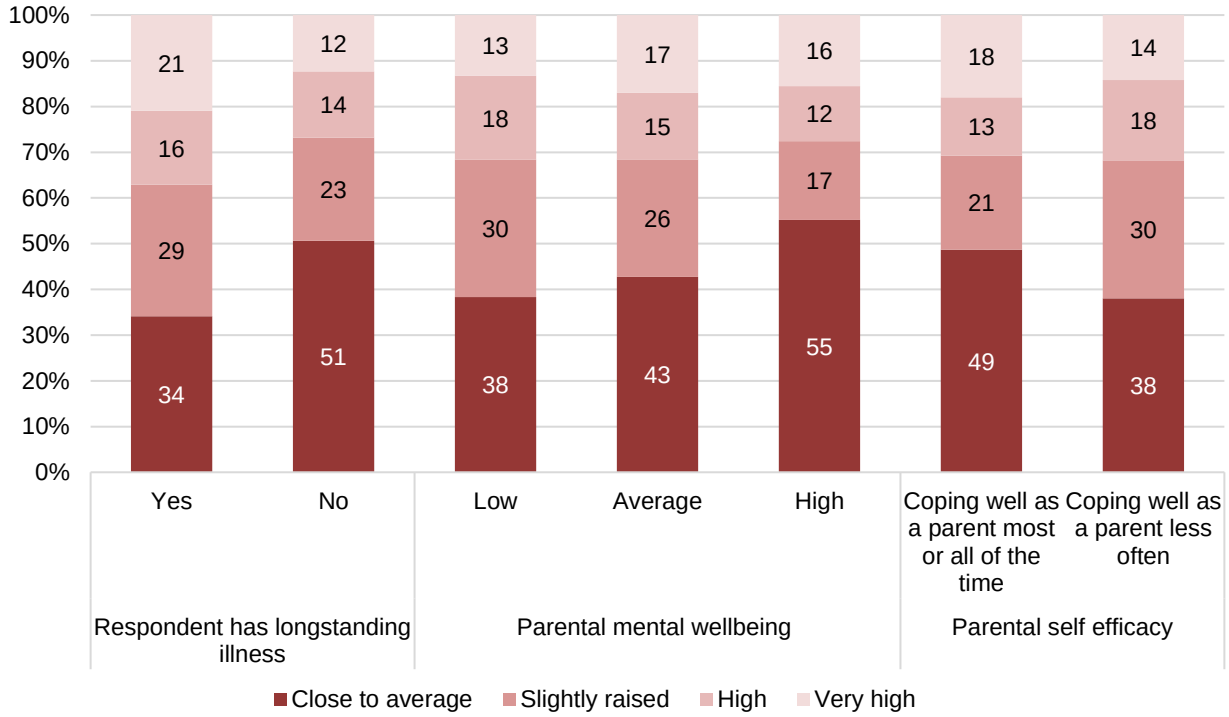
Figure 18: SDQ total difficulties by parent's level of education



Base: All children (keyworker observations)

Elements of parental health and wellbeing also appeared to be related to children's SDQ scores (Figure 19). Children whose parents had a longstanding illness, those whose parents had low mental wellbeing and those whose parents were coping well less often were all less likely to have SDQ total difficulties scores in the close to average range than children whose parents did not have a longstanding illness, with average or high mental wellbeing and who were coping well most of the time. For example, 34% of children whose parents had a longstanding illness had a total difficulties score in the close to average range compared with 51% of children whose parents did not have a longstanding illness.

Figure 19: SDQ total difficulties by parental longstanding illness, parental mental wellbeing and parental self-efficacy

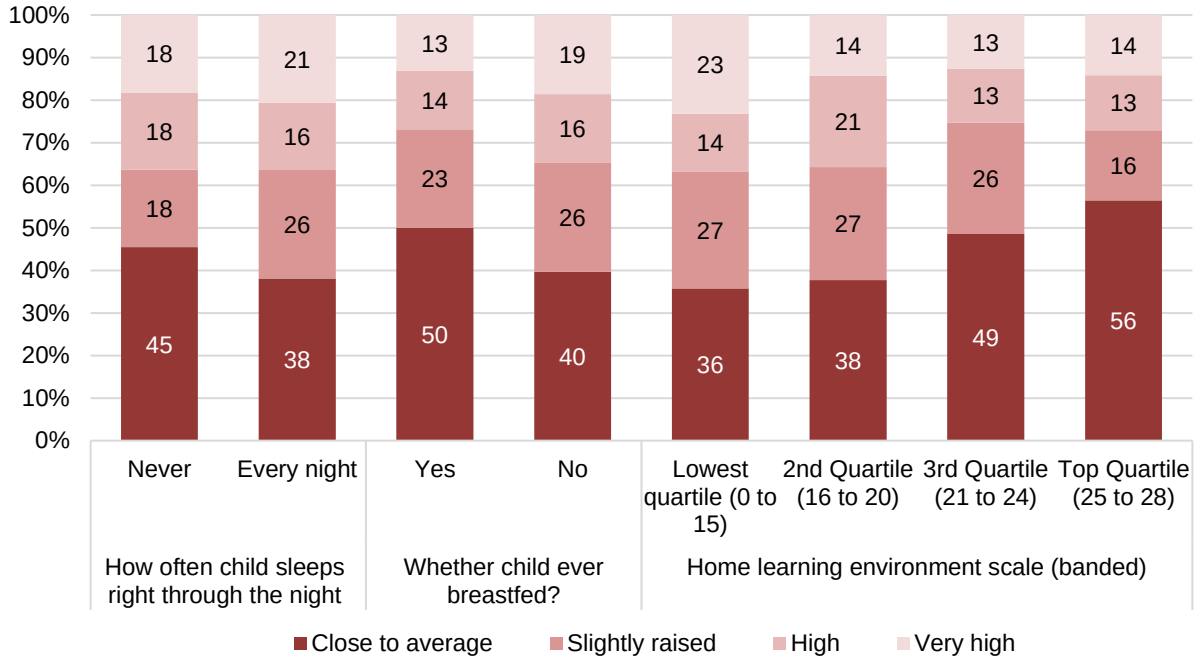


Base: All children (keyworker observations)

As shown in Figure 20, there was also a relationship between children's sleeping patterns, whether they were ever breastfed, their engagement in home learning activities and their SDQ total difficulties scores. Children who slept through the night every night were less likely than those who never slept through the night to have close to average scores (38% compared with 45%). However, less frequently sleeping through the night was not consistently linked to lower difficulties and the relationship is mixed (see Table B6 in Appendix B). A higher proportion of children who were breastfed than those who were not had close to average scores (50% compared with 40%) and a lower proportion had high or very high scores (27% compared with 35%)[24]. Those children who experienced a lower frequency of home learning activities were less likely to have a total difficulties score in the close to average range and more likely to have scored in the high or very high range than those who experienced a higher frequency of activities.

[24] Note that this finding does not control for the socio-economic patterning of breastfeeding which is more common amongst mothers with higher levels of education.

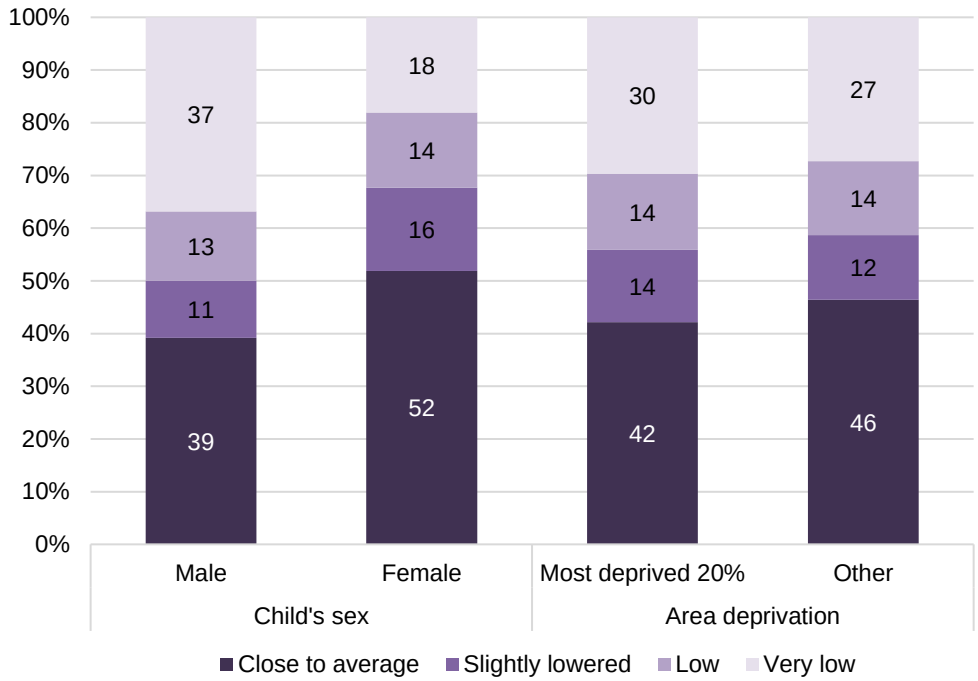
Figure 20: SDQ total difficulties by sleeping pattern, whether ever breastfed and home learning activities scale-



Base: All children (keyworker observations)

The pro-social sub-scale of the SDQ is scored in the opposite way to the difficulties scales. In this instance, a higher score indicates more positive pro-social behaviour whereas a low score indicates more problematic behaviour. Overall, 45% of children had a score in the close to average (highest) range, 13% in the slightly lowered range, 14% scored low and 28% very low. As noted in relation to several of the other sub-scales, there were differences between boys and girls (Figure 21) with boys twice as likely as girls to score in the very low range (37% compared with 18%). Differences by area deprivation were much smaller: children living in the most deprived 20% of areas were only slightly more likely than those living in other areas to have very low pro-social scores (30% compared with 27%).

Figure 21: SDQ pro-social by child's sex and area deprivation



Base: All children: (keyworker observations)

General health and long-standing illness

Most parents (57%) ranked their child's general health as being 'very good' with 32% reporting it as 'good'. A small proportion (10%) said their child's health was 'fair' and even fewer (1%) said it was 'bad'. No-one ranked their child's health as being 'very bad'. Perceptions of children's health were more positive when the child in question is female, as can be seen in Table 3. For example, 62% of female children were said to have very good health compared with 52% of male children.

There were no notable differences in general health between children from single parent or couple households (see Table B7 in Appendix B). Some small differences were evident by area deprivation with children from less deprived areas more likely to have good or very good health (92%) than children from the most deprived 20% of areas.

Table 3: Child's health in general by sex

	Male child	Female child	All
	%	%	%
Very good	52	62	57
Good	32	32	32
Fair	13	6	10
Bad	1	-	1
Very bad	1	-	-
Unweighted base	*223*	*199*	*424*
Base: All respondents (parent survey)			

Thirteen percent of children in the cohort had a long-term illness and 11% had a long-term limiting illness. Amongst those with a long-term illness, 23% of parents stated it limited the child's normal activity 'a lot', 64% that it limited the child 'a little' and 13% stated it did not limit the child at all. The proportion of children with a long-term illness in the cohort is lower than that recorded for all two- and three-year-olds in the Growing Up in Scotland study (17%)[25].

Boys (16%) were more likely than girls (10%) to have a long-standing illness. In contrast to trends in other child outcomes reported here, children living in the 20% most deprived areas were less likely (10%) than those living in other areas (15%) to have a long-standing illness. Children living in couple families (15%) were also slightly more likely than those living in single parent households to have such an illness reported.

Illnesses were most commonly perceived to limit the child in relation to stamina/breathing difficulties and mobility. A full breakdown is provided in Table 4.

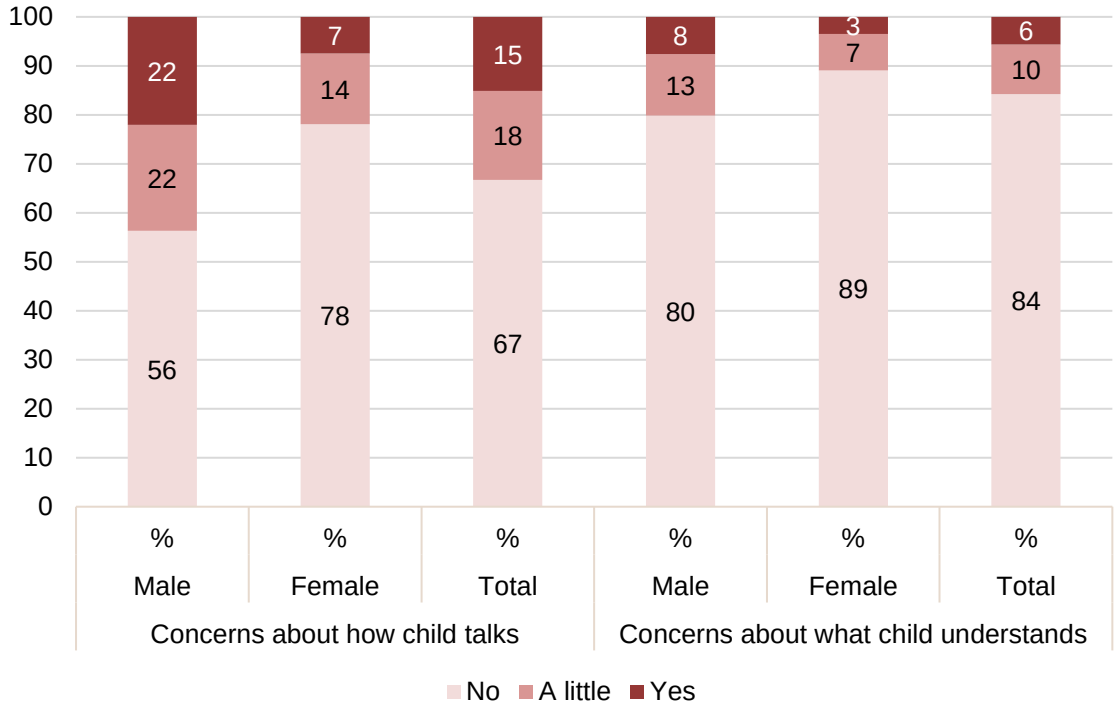
[25] Bradshaw, P., Knudsen, L. and Mabelis, J. (2015) Growing Up in Scotland: The circumstances and experiences of 3-year-old children living in Scotland in 2007/08 and 2013.

Table 4: How longstanding condition or illness affects child

	All
	%
Hearing (e.g. due to deafness or partial hearing)	14
Mobility, such as difficulty moving around	35
Learning or concentrating or remembering	29
Stamina or breathing difficulty	35
Mental health, social emotional or behavioural issues	31
Other impairment(s)	22
Unweighted base	*51*
Base: All children with a long-term condition (parent survey)	

Figure 22 summarises parental concerns with child development by child sex, specifically concerns with how the child talks and what they understand.

Figure 22: Concerns about what child understands and about how child talks by child's sex



Base: All respondents (parent survey)

Roughly one-third (33%) of respondents had concerns about how their child talks and 16% had concerns about what their child understood. In both areas, parents were more likely to be concerned when the child was male, particularly with regards to how the child talks: 44% of parents were concerned about how their child talks when the child was male compared with 21% where the child was female.

Parents living in the most deprived 20% of areas were less likely than those living in other areas to have concerns about how their child talks (12% compared with 18%). Single parents were less likely than parents in couple households to have concerns about how their child talks – 72% had no concerns compared with 62% of parents in couple households. There were no notable differences in parental concerns about what the child understands by either area deprivation or single parent/couple households (see Tables B8 and B9 in Appendix B).

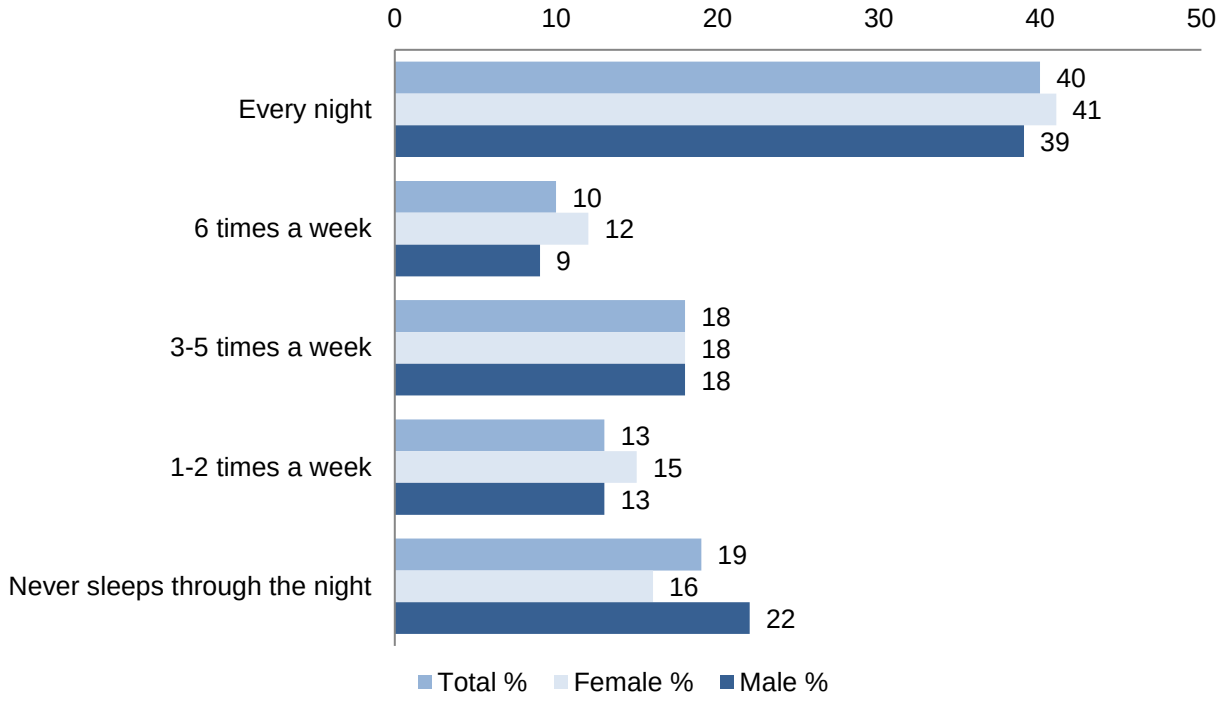
Developmental risk factors

Parents were asked for a range of information capturing aspects of their child's early childhood circumstances, experiences and behaviours which are known to be associated with child development. These include sleep patterns, breastfeeding, and activities at home that promote learning. They were also asked about any concerns they had about their child's development.

Figure 23 shows how often, over the course of a typical week, the child was reported to sleep through the night by sex. Around one in five (19%) children never did this whilst two in five (40%) did so every night. Girls were more likely to sleep through the night than boys: 22% of boys never slept through the night compared with 16% of girls.

Whilst children in single parent households were more likely than those in couple households to never sleep through the night (20% compared with 16%) they were not consistently more disrupted sleepers and were just as likely to sleep through the night every night (40% compared with 41%). There were no notable differences in sleeping behaviour by area deprivation (see Table B10 in Appendix B).

Figure 23 Frequency of sleeping through the night by child's sex



Base: All respondents (parent survey)

Forty percent of children were ever breastfed. As shown in Table 5, boys were slightly more likely to have ever been breastfed than girls (42% compared with 38%) and single parents were less likely to have ever breastfed their child than those in two parent families (38% compared with 46%). Breastfeeding rates did not vary by area deprivation (see Table B11 in Appendix B).

Table 5: Whether child was ever breastfed by child sex and single parent/couple household

	Male child	Female child	Single parent	Couple household	All
	%	%	%	%	%
Yes	42	38	38	46	40
No	58	62	62	54	60
Unweighted base	*217*	*198*	*206*	*176*	*416*

Base: All respondents (parent survey)

Parents were asked how often the child had been engaged in 'home learning activities' in the previous seven days. These included looking at books/reading stories, painting or drawing, reciting nursery rhymes/singing songs and playing at recognising letters, words, numbers or shapes.

Almost all children (99%) had been engaged in some form of home learning activity in the previous seven days. The most common activity was reciting nursery rhymes or singing songs which 64% of children had done every day. Looking at books and reading stories was also very common with half of children (50%) having done this every day. Activities involving painting or drawing and those involving recognising letters, words, numbers or shapes were less common with 23% and 39% of children doing these every day.

Experience of some activities varied according to children's characteristics, as shown in Table 6. Boys and children from more deprived areas had looked at books or read stories less frequently than girls and children from other areas. For example, 55% of children in less deprived areas had looked at books every day in the last 7 days compared with 43% of children living in the most deprived 20% of areas. This difference was not evident between children in single and couple households.

Table 6: Frequency of home learning activities by child sex, area deprivation and single/couple household

	Male child	Female child	Most deprived 20%	Other area	Single parent	Couple household	All
	%	%	%	%	%	%	%
Looked at books or read stories							
Not in last 7 days	1	1	2	1	1	2	1
1 to 3 days	27	22	27	23	27	21	27
4 to 6 days	26	22	28	21	23	26	26
7 days	45	55	43	55	50	51	45
Painting or drawing							
Not in last 7 days	8	4	7	5	4	7	8
1 to 3 days	40	35	39	36	40	34	40
4 to 6 days	31	38	30	38	34	35	31
7 days	22	24	24	21	21	24	22
Recited nursery rhymes or sung songs							
Not in last 7 days	9	3	5	7	4	9	9
1 to 3 days	20	13	24	11	19	14	20
4 to 6 days	13	13	9	17	14	11	13
7 days	58	71	63	65	63	66	58
Recognising letters, words, numbers or shapes							
Not in last 7 days	12	12	10	14	10	16	12
1 to 3 days	25	22	24	24	27	19	25
4 to 6 days	27	23	25	25	23	27	27
7 days	36	42	40	37	40	38	36
*Unweighted base**	*210*	*192*	*189*	*206*	*208*	*187*	*403*

Base: All respondents (parent survey)

**Note: bases vary slightly for each individual activity. The bases shown are the lowest amongst the four activities.*

Boys, children from more deprived areas and those in single parent households were slightly less likely to have engaged in activities involving painting and drawing and to have done so less frequently in the last 7 days than girls, children living in

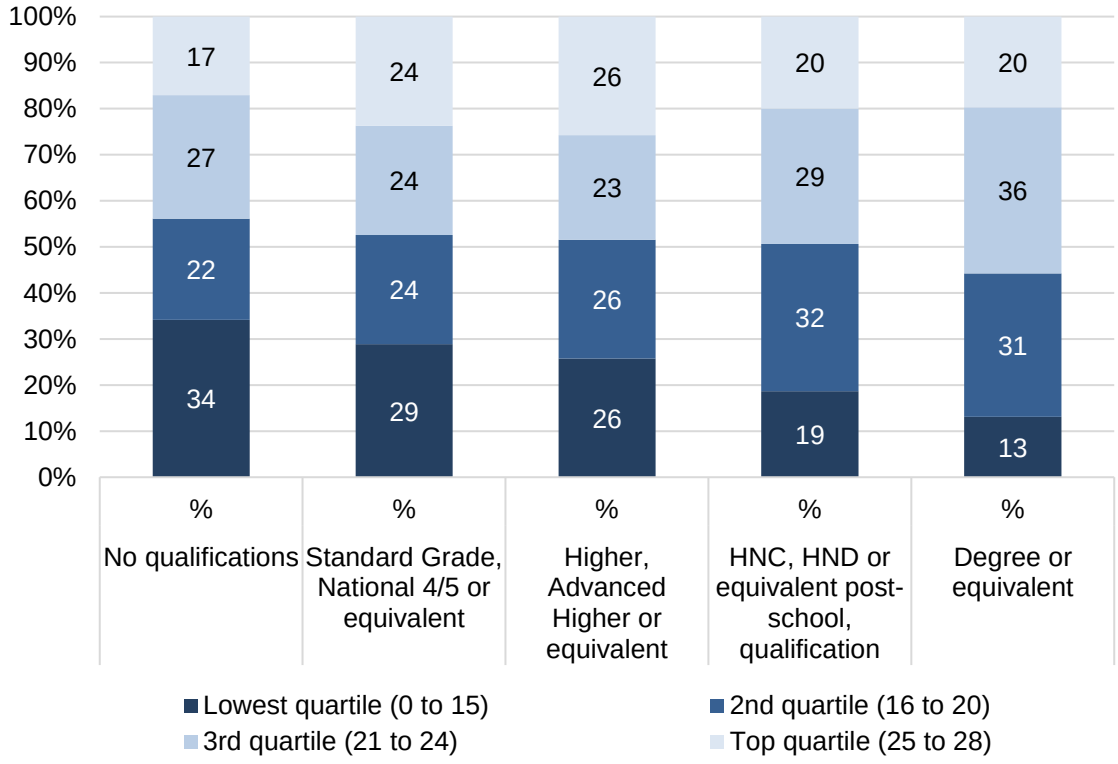
other areas and those in couple households. For example, 96% of girls had engaged in such activities including 38% who had done so on four to six days compared with 92% and 31% respectively for boys.

This pattern was generally evident for reciting nursery rhymes and singing songs and activities involving recognising letters, words, numbers or shapes. Differences between boys and girls are particularly notable in relation to reciting nursery rhymes and singing songs – 71% of girls had done so every day in the last 7 days compared with 58% of boys.

The frequencies at which children had done each activity in the last seven days were summed together to create a total home learning activity scale. The scale ranged from 0 to 28 with the highest score indicating the child had been engaged in all four activities on each of the previous seven days. The cohort was then split into four evenly sized groups (quartiles) according to their scores on the scale: 0 to 15 (25% of all children); 16 to 20 (26%); 21 to 24 (27%) and 25 to 28 (22%).

Variations in frequency of activities were also seen by parental educational qualifications (Figure 24). Children whose parent had no qualifications were most likely to be in the lowest activity group (34%) whilst children whose parent was degree educated were least likely to be in this group (13%). Children whose parents had no qualifications were also least likely to be in the highest activity group (17%). However, the frequency of activities did not increase as level of qualifications increased. Children whose parent had Higher or Advanced Higher Grades or equivalent were most likely to be in the highest activity group (26% compared with 20% amongst children with a degree-educated parent).

Figure 24: Home learning activity score by highest parental educational qualification



Base: All respondents (parent survey)

Parent outcomes

Economic activity

Parents were asked which, from a range of activities – including working 30 hours or more or being in full-time education – they had done in the last week. As shown in Table 7, looking after the home or family was the activity most likely to have been reported by parents with 70% saying they had done so in the previous seven days.

Table 7: Parent's economic activity*

What were you doing last week, that is the seven days ending last Sunday?	All
	%
Working 30 or more hours a week (including if currently on leave or sick)	10
Working fewer than 30 hours a week (including if currently on leave or sick)	21
On maternity/parental leave from an employer	2
Looking after home or family	70
Waiting to take up paid work already obtained	0
Out of work and looking for a job	9
Out of work, because of long-term sickness or disability	9
On a Government training or employment scheme	0
In full-time education (including on vacation)	5
In part-time education (including on vacation)	1
Wholly retired	1
Not in paid work for some other reason	11
Unweighted base	*422*
Base: All respondents (parent survey)	

**Note: respondents were able to choose more than one response. As such, percentages will not total 100%.*

A total of 33% of respondents reported that they were in work, with 10% reporting working full-time (30 or more hours a week), 21% working part-time, and 2% being on maternity or parental leave from an employer. A further 9% reported that they were out of work and looking for a job.

Economic activity varied a little according to area deprivation (see Table B12 in Appendix B). For example, parents living in the most deprived 20% of areas, although only being slightly less likely to say they were in work than parents living in other areas (31% compared with 35% including those on maternity/parental leave),

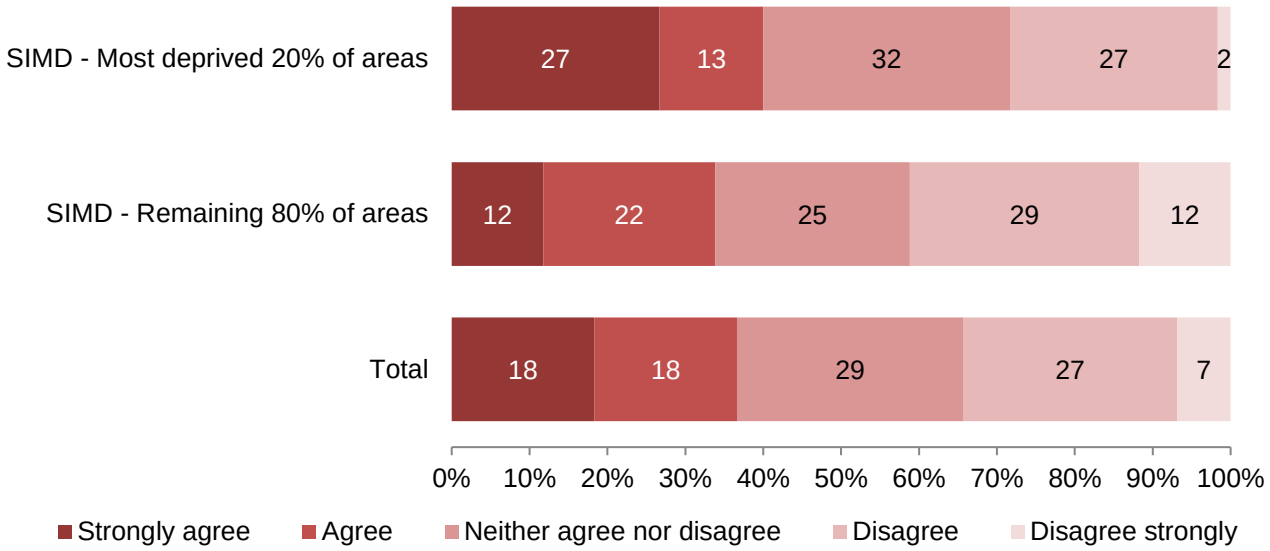
they were far less likely to be working full-time (5% compared with 16%) and more likely to be working part-time (24% compared with 18%).

Alongside information about current economic activity, the parent questionnaire also asked respondents a series of attitudinal questions related to use of childcare and the impact this has on employment opportunities.

Those who were employed or in training were asked whether they agreed or disagreed with the following statement: “If I could afford good quality childcare which was reliable, convenient and affordable, I would work more hours.” Figure 25 shows the total responses to this question and a breakdown of responses by area deprivation.

Just over a third of respondents (36%) agreed with this statement, while a similar proportion (34%) disagreed. Those living in the most deprived 20% of areas were more likely than those in less deprived areas (Figure 25) to strongly agree that they would work more hours if they could afford childcare (27% compared with 12%).

Figure 25: Whether would work more hours if could afford childcare by area deprivation

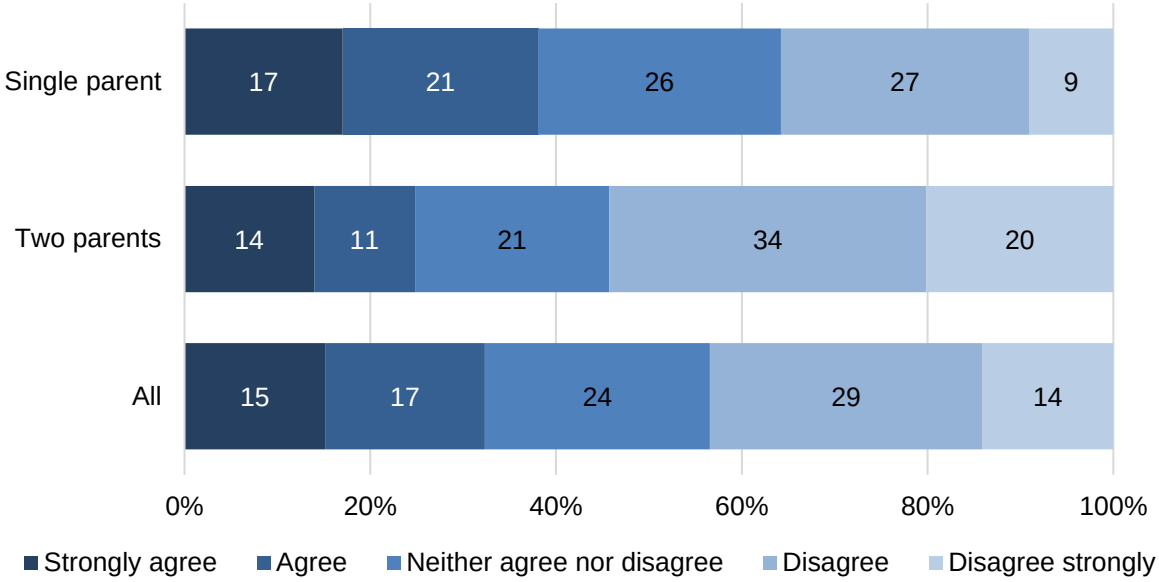


Base: All respondents currently in paid employment or training (parent survey)

Single parents and couple parents were equally likely to agree with this statement (36% and 35% agreeing or strongly agreeing respectively). However, single parents were more likely than couple parents to strongly agree (21% compared with 15%). The bases are too small to explore differences by parental education level.

Parents who were not working were asked whether they agreed or disagreed with the following statement: “A lack of affordable, convenient, good quality childcare is one of the main reasons I’m not working at the moment.” Thirty-two percent of parents agreed with this statement whilst 43% disagreed. As shown in Figure 26, a higher proportion of single parents than those in two parent households agreed that this was the case.

Figure 26: Whether a main reason not working is because of a lack of childcare by number of parents in household



Base: All respondents currently not in paid employment or training (parent survey)

Parents living in the most deprived 20% of areas were less likely to agree/strongly agree with this statement than those living in other areas (27% compared with 37%). More similar proportions disagreed/strongly disagreed (46% compared with 43%) with parents in more deprived areas more likely to neither agree or disagree than parents in other areas (27% compared with 20%). Amongst parents with different qualification levels, those with no qualifications were least likely to agree/strongly agree (20%) whilst those with Higher/Advanced Higher grades or equivalent were most likely to agree/strongly agree (49%). Twenty-eight percent of degree-educated parents agreed.

In an attempt to examine attitudes which may affect the number of parents in work, the survey asked parents whether they agreed or disagreed with this statement: “A two-year-old child is likely to suffer if his or her mother works.” One in ten respondents (10%) agreed that a child would suffer if the mother worked, while 63% disagreed. There were no notable differences in levels of agreement between parents in single and two parent households and between those living in the 20% most deprived areas and less deprived areas.

Parental health and wellbeing

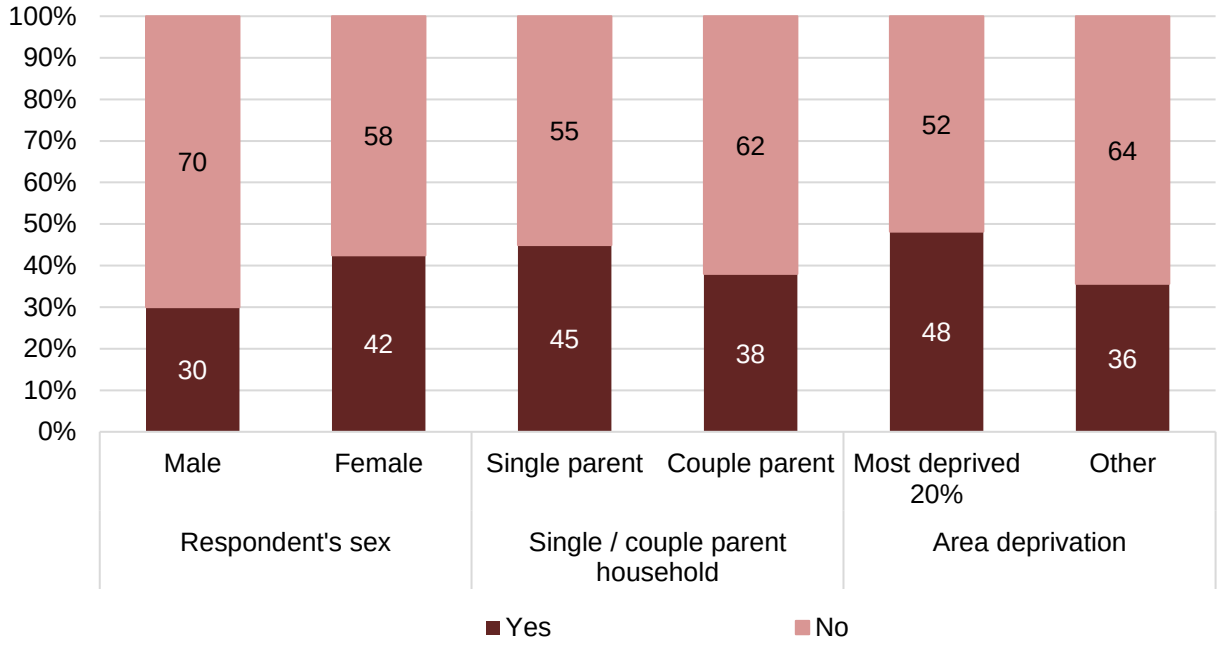
Most respondents (63%) rated their own general health as being good or very good, with 28% rating it as fair and 9% considering it to be bad or very bad. Self-reported good health appears to be lower among mothers responding to the parent survey than generally amongst mothers in Scotland with children under school age. For example, the Scottish Health Survey 2017 found 83% of mothers of children

aged under 5 reported their health to be good or very good with only 3% saying it was bad or very bad[26].

Parents living in the most deprived 20% of areas were less likely than those living in other areas to rate their health as good or very good (59% compared with 65%). There was no clear trend in general health by parent level of education and no notable differences between single parents and those in couple households (see Tables B13 and B14 in Appendix B).

Two-fifths (41%) of all respondents had at least one longstanding illness. This represents poorer health than amongst a nationally comparable group of mothers from the Scottish Health Survey, of whom 27% reported having a longstanding illness. A little over one-third (36%) of all respondents had a limiting longstanding illness. Amongst those with a longstanding illness, 28% reported that their illness limited their activities 'a lot' whilst a further 59% said they were limited 'a little'.

Figure 27: Respondent/parent longstanding illness by sex, single parent/couple household and area deprivation



Base: All respondents (parent survey)

As shown in Figure 27, longstanding illness was more common amongst parents who were female (42% compared with 30% amongst males), living in a single parent household (45% compared with 38% for parents in couple households) and those living in the most deprived 20% of areas (48% compared with 36% amongst those living in other areas). There was no linear trend according to level of education. Parents with a highest qualification at Higher Grade or equivalent were

[26] 235 mothers of children aged under 5 participated in the Scottish Health Survey 2017. Note that this question was asked by an interviewer in the Scottish Health Survey, rather than being a pen and paper self-completion as used in the ELC parent survey. This mode difference may account for some of the difference in responses.

most likely to report a longstanding illness (56%) whilst those with an HNC/HND level qualification were least likely to report one (33%).

Parents with a longstanding illness were asked whether and how it affected them. Responses are summarized in Table 8. As can be seen, more than three-quarters (79%) of those who had a longstanding illness reported that their mental health was affected.

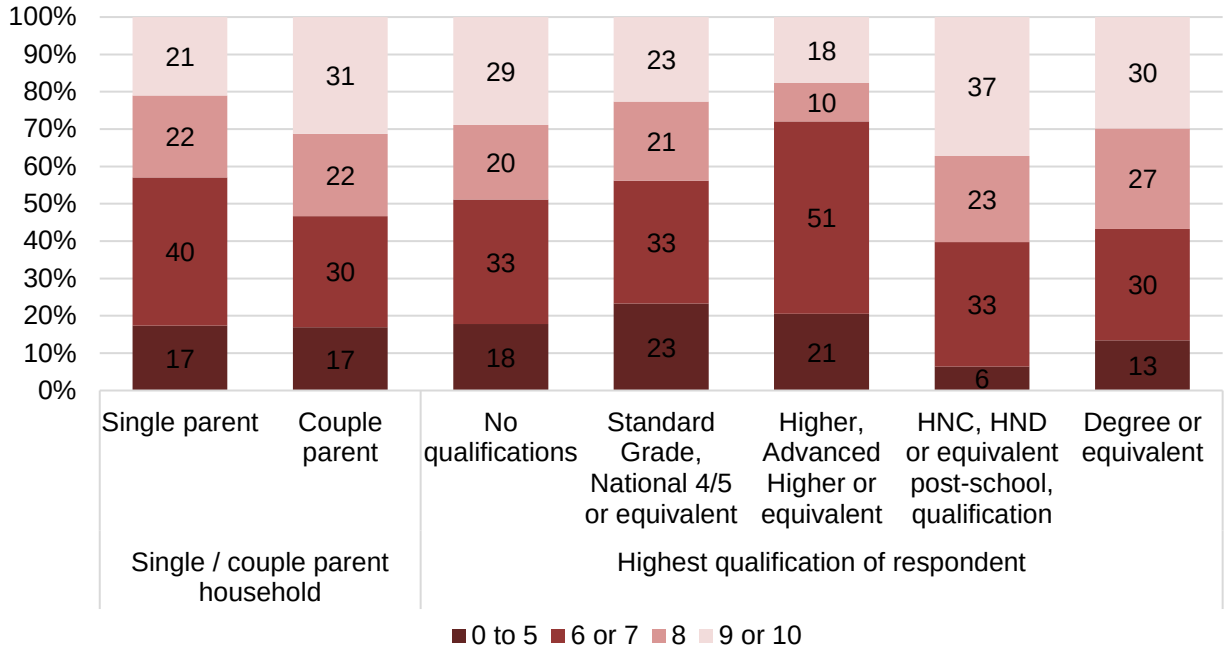
Table 8: How longstanding condition or illness affects parent

	All
	%
Vision	4
Hearing (e.g. due to deafness or partial hearing)	5
Mobility, such as difficulty moving around	23
Learning or concentrating or remembering	22
Stamina or breathing difficulty	14
Mental health, social emotional or behavioural issues	79
Other impairment(s)	12
Unweighted base	*171*
Base: All children with a long-term condition (parent survey)	

Respondents were asked to rank their life satisfaction on a scale from zero to 10, with zero being extremely dissatisfied and 10 being extremely satisfied. The average score for all respondents was 7.2, a little below that of the national sample from the Scottish Health Survey, where the mean response for mothers of children aged under five was 8.1.

There was little notable variation in mean life satisfaction score by respondent characteristics. However, looking at the proportions with scores within different ranges (Figure 28) illustrates some differences that the mean scores do not identify. For example, 31% of couple parents score 9 or 10 on the scale compared with 21% of single parents. Amongst parents with different levels of qualifications, those with higher qualifications were more likely to score 9 or 10 on the scale.

Figure 28: Life satisfaction score by single parent/couple household and parent's highest level of education



Base: All respondents (parent survey)

The Short Warwick-Edinburgh Mental Wellbeing Scale (SWEMWBS) was also included in the parent survey. This is comprised of seven questions asking how the respondent had been feeling over the previous two weeks. Responses to these questions were summed to create a scale, with scores ranging from 7 to 35. The mean score of 25.1 was very similar to that from the nationally representative sample of mothers with a child aged under 5 in the Scottish Health Survey (mean of 25.3)[27] and indeed to the national average for all adults and that for all women (each being 25.1).

As shown in Table 9, there are some small differences in mean wellbeing scores by area deprivation and parental level of education. Parents living in the most deprived 20% of areas had slightly lower scores (25.0) than those living in other areas (25.6). Those with no or lower levels of qualifications also tended to have lower scores than those with higher qualifications. For example, the mean score amongst parents with lower school level qualifications was 25.1 compared with 26.1 amongst parents with a degree level qualification. Differences between single and couple parents were smaller (25.2 compared with 25.6).

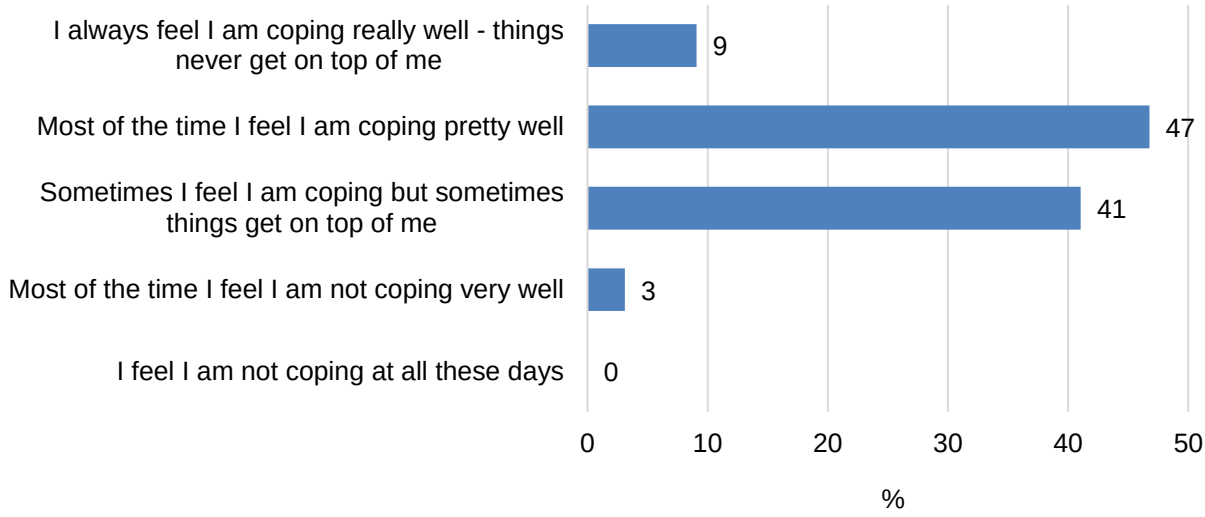
[27] The Scottish Health Survey included the complete set of 14 items. 206 mothers of children aged under 5 completed this section of the Health Survey. For comparative purposes, only the 7 items included in the Short form of the scale, used in the ELC parent survey, were counted. In both surveys, the questions were asked in a pen and paper self-completion booklet, so the comparison can be considered fairly robust.

Table 9: Mean SWEMWBS score by area deprivation and parent's highest level of education

	Mean score
Area deprivation	
Most deprived 20%	25.0
Other areas	25.6
Parent's highest level of education	
No qualifications	24.6
Standard Grade, National 4/5 or equivalent	25.1
Higher, Advanced Higher or equivalent	24.3
HNC, HND or equivalent post-school, qualification	26.7
Degree or equivalent	26.1
Unweighted base	*419*
Base: All respondents (parent survey)	

Respondents were also asked how they were coping as a parent/carer (Figure 29). More than half felt they were coping well most or all of the time (56%). A further 41% felt they were coping sometimes, and only 3% reported that they were not coping very well. There were no notable differences in response by single/couple parent households nor by area deprivation.

Figure 29: Extent to which respondent feels they are coping as a parent/carer



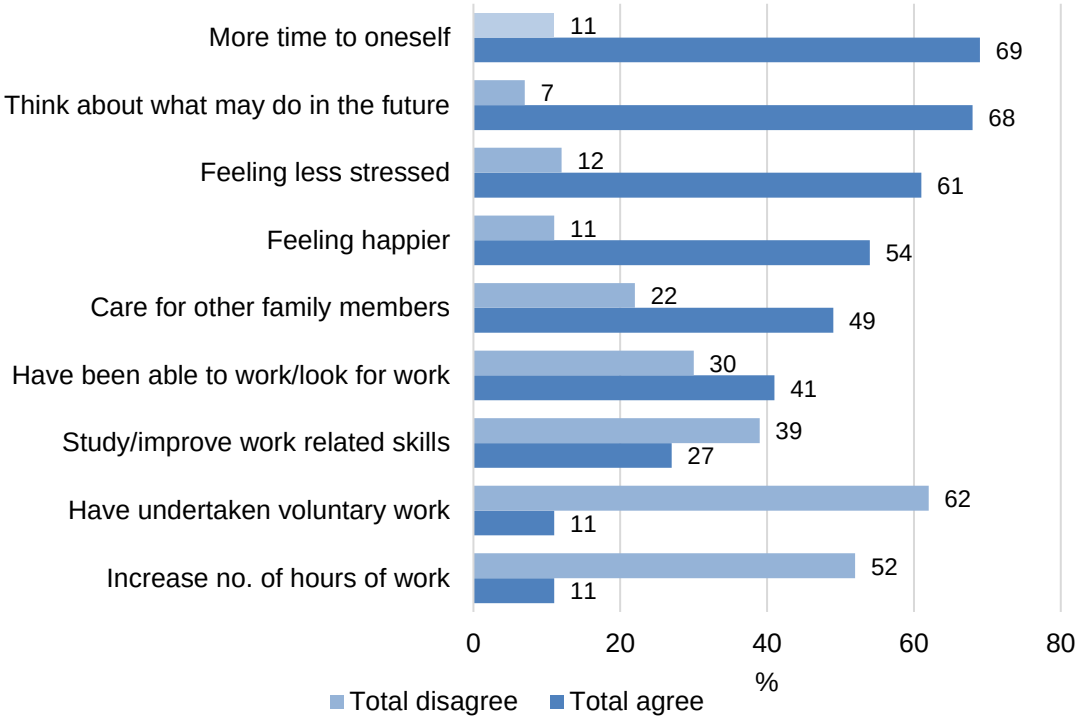
Base: All respondents (parent survey)

A key interest of the study is the impact of children attending ELC on how parents use their time and on their wellbeing. Parents were asked to indicate whether they agreed or disagreed that they had participated in certain activities or experienced a

change in feelings specifically because their child was in nursery. The responses are summarised in Figure 30.

As the graph shows, parents perceived an overall positive effect of having their child in ELC. Most agreed they felt happier (54%), less stressed (61%), that they had more time to themselves (69%) and that they had been able to think about what they may do in the future (68%). Only a small proportion of parents agreed that having their child in nursery had allowed them to increase their working hours (11%) but a significant minority agreed it had allowed them to look for work (41%) or undertake study or training (27%).

Figure 30: Activities done/perceived change in feelings because of child being in nursery



Base: All respondents (parent survey)

Differences in agreement with selected activities and perceived change – being able to think about the future; feeling less stressed; been able to work/look for work; been able to study/improve work related skills – were compared according to parent characteristics. The results are summarised in Table 10.

Single parents were more likely than parents in couple households to agree that having their child in nursery had allowed them to think about the future (72% compared with 62%). They were also more likely to say they had been able to look for work (44% compared with 38%). There were no notable differences by area deprivation (see Table B15 in Appendix B).

In relation to SDQ total difficulties scores, parents whose children had a close to average score were generally more likely than those whose child had a higher score to agree that their feelings had changed and that they had engaged in activities as a result of their child being in nursery. For example, 49% of parents

whose child had a close to average score reported being able to look for work compared with 37% of those whose children had a very high score.

Table 10: % agreeing activities done/perceived change in feelings because of child being in nursery by single/couple household and child's SDQ total difficulties score

	Think what may do in future	Feeling less stressed	Able to look for work	Study/ train	*Base: All respondents (parent survey)*
Single/couple parent household					
Single parent	72	62	44	27	*208*
Couple household	62	59	38	27	*174*
SDQ total difficulties score					
Close to average	74	65	49	32	*162*
Slightly raised	59	55	35	22	*95*
High	67	62	34	26	*58*
Very high	67	56	37	24	*59*

Characteristics of ELC

To gather information on the characteristics of ELC settings, inspectors from the Care Inspectorate (acting as observers independent of their regulatory roles) conducted observations of 146 settings using the most recent version of the Infant / Toddler Environment Rating Scale (ITERS-3). The ITERS, alongside the Early Childhood Environment Rating Scale (ECERS), were developed in the United States by the Environment Rating Scale Institute and are widely used in English speaking countries. In the United Kingdom, ECERS has been used in both the Effective Provision of Pre-School Education (EPPE) study and in the more recent Study of Early Education and Development (SEED) in England[28]. In Scotland, ECERS was used as long ago as 1994[29].

Both environment rating scales have a positive international reputation as a way of assessing the quality of provision in a 'snap-shot' observation and as a tool which gives researchers access to the everyday experiences of children in their educational settings. The scales have high reliability at indicator and item level when used by trained observers[30]. Validity is also high in terms of their relationship to other ways of assessing quality and to measures of children's outcomes. Further, in conjunction with academics and the Care Inspectorate, some minor amendments were made to ensure that the ITERS-3 was reflective of the aspects of quality that are expected in Scotland (e.g. that rainfall should not prevent outdoor play).

ITERS-3 was used for a number of reasons: it centres on the experience of the child in the setting; it allows for the effect of setting quality on child outcomes to be controlled for; and it is relatively easy to administer given that only one three hour observation is required. This tool can also be used to see if particular characteristics of settings contribute to differential outcomes in children. Further, ITERS-3 is designed for use in settings where most children are aged under 36 months and and, as such, it was deemed suitable for use with the cohort of two-year-olds involved in Phase 1 of the SSELC. Although many settings observed did not have a specific two-year-old room, using ITERS-3 allowed for age-appropriate criteria to be observed.

It is important to note, however, that these tools are not the only method of assessing setting quality in Scotland. Indeed, the Care Inspectorate ratings provide a broader measure of the quality of practice and policy within settings that have also been found to be related to children's outcomes in Scotland.

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[28] See Melhuish, E. & Gardiner, J. (2018) Study of Early Education and Development (SEED): Impact Study on Early Education Use and Child Outcomes up to age four years Research Report: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/738725/SEED_Impact_Age_4_Report_September_2018.pdf.

[29] Stephen, C. and Wilkinson, J.E. (1995) 'Assessing the Quality of Provision in Community Nurseries', *Early Child Development and Care*. 108: 83-98.

[30] Care Inspectorate staff attended training with academic colleagues on how to use the ITERS-3 and completed their first observation in pairs to ensure consistency of scoring.

As with the Care Inspectorate methodology, the setting observations focussed on outcomes. However, the methodology differed in that the ITERS-3 tool was used to observe for three hours, with no consultation with setting staff and no professional dialogue or explicit feedback provided. This was because the observations were to be a snapshot to inform the SSELC and control for the effect of setting quality on child outcomes, rather than serving as an assessment of an individual setting's quality. During the ITERS-3 observations, observers looked at the six domains specifically for two-year-olds. In contrast, during a formal inspection, Care Inspectorate inspectors consider a range of areas that impact on experiences for all children attending the setting, not only the two-year-olds. The key areas covered during a formal inspection are likely to include some or all of the domain areas but can also cover other aspects of the provision to evaluate the overall quality of the setting.

The ITERS-3 scale comprises 33 items across 6 different subscales: space and furnishings; personal care routines; language and books; activities; interaction and program structure.

- Space and furnishings includes observation of: indoor space; furnishings for care, play, and learning; room arrangement; and display for children.
- Personal care routines includes observation of: meals and snacks; toileting; health practices; and safety practices.
- Language and books includes observation of: talking with children; encouraging vocabulary development; responding to children's communication; encouraging children to communicate; staff use of books with children; and encouraging children's use of books.
- Activities includes observation of: fine motor; gross motor; art; music and movement; blocks; dramatic play; nature and science; maths and number; appropriate use of technology; and promoting acceptance of diversity.
- Interaction includes observation of: supervision of gross motor play; supervision of non-gross motor play and learning; peer interaction; staff-child interaction; providing physical warmth and touch; and guiding children's behaviour.
- Programme structure includes observation of: schedule and transitions; free play; and group play activities.

In line with ITERS-3 guidance, each subscale is scored from 1 to 7, and these scores are calculated by averaging the score for each item within the subscale. Each of the 33 items are also scored from 1 to 7, and these scores are calculated using the indicators contained within each individual item. Indicators are grouped under scores of 1 (inadequate), 3 (minimal), 5 (good), and 7 (excellent), with each indicator providing an example of what should be observed relevant to each score. Indicators themselves are scored as 'yes' or 'no' depending on whether the indicator has been observed. In some cases, observers are able to record indicators or items as not applicable; these are then excluded when calculating item

or subscale scores. A score of 1 is given if any indicator grouped under 1 is scored yes. For an item to score a 7, each indicator grouped under 7 must be scored yes.

In addition, background data was collected during obsrvations on the structure of the setting, including: the number of children and staff present at the time of observation; whether there was a dedicated room for two-year-olds; and whether there was freeflow[31] access to outdoor space. Three-quarters of the settings (78%) had a dedicated room or rooms for two-year-olds. On the day of the observations, just over a third of settings (37%) had no more than five children in the rooms where two-year-olds were observed, around a third (30%) had between 6 and 8 children in the room, and another third (33%) had 9 or more children in the room. In every one of the settings, children had access to outdoor space, although this was freeflow in one in six of the settings (16%).

Table 11: % of settings with score 1 to 7 by ITERS-3 subscale

		ITERS Score							*Base: All settings observed*
		1 < 2*	**2 < 3**	**3 < 4**	**4 < 5**	**5 < 6**	**6 < 7**	**7**	
Space and Furnishings	%	-	2	7	29	41	19	2	*146*
Personal Care Routines	%	1	8	15	27	32	14	2	*146*
Languages and Books	%	-	3	16	28	35	17	1	*146*
Activities	%	8	27	40	19	5	1	-	*146*
Interaction	%	-	3	10	23	29	29	6	*146*
Programme Structure	%	1	3	5	14	22	34	21	*146*

* Settings' mean score for each subscale was categorised based on the highest score fully achieved e.g. if a setting scored 4.5 for the 'Space and Furnishings' subscale, they would be categorised as '4 < 5' rather than rounding up to 5. This decision was made in consultation with academic colleagues and the Care Inspectorate.

Table 11 summarises scores across the ITERS subscales. Settings scored highest on the Programme Structure subscale, with 77% of settings scoring 5 or above. Settings also scored higher on the Interaction and Space and Furnishings scales, with slightly under two thirds of settings being ranked 5 or above (64% and 62% respectively). It is worth noting that with a maximum possible score of 7 on each item, an average score of 5 is still likely to indicate room for improvement on multiple items within the subscale.

On the Personal Care Routines and Language and Books subscales, 48% and 53% of settings respectively scored 5 or above. The Activities subscale stands out as an area where many settings were performing less well. Thirty-five percent of settings scored below 3 for activities, with only 6% ranked scoring 5 or above.

In this first report, only top level analysis of the ITERS-3 scores have been provided. These data will be analysed in more detail, considering the impact of

[31] Freeflow play allows children to move freely indoors and outdoors as they please.

setting quality on child outcomes, alongside the longitudinal data collected in Phase 3 of the SSELC. Further, the settings observed during Phase 1 of the SSELC are not representative of the whole ELC sector in Scotland, and results should not be taken as such.

Summary and conclusions

This report has provided an insight into findings from the initial baseline phase of the Scottish Study of Early Learning and Childcare. When interpreting these findings, it is important to note several points about the research design and methods. First, the cohort for Phase 1 consisted of children aged two who were eligible for receipt of 600 hours of funded ELC. As the eligibility for funded ELC at age two is based on criteria such as the parents being in receipt of certain benefits[32], the data reflect the circumstances and experiences of a particular group of parents and children; it is not representative of all two-year-olds accessing ELC in Scotland. In addition, because a higher than expected number of local authorities and settings were excluded because they were already providing government-funded ELC at an expanded level of more than 600 hours a year to eligible two-year-olds, settings were mostly included if they had eligible children and were willing to participate. Thus, the results should be considered as representative of those who took part, rather than as necessarily representative of all eligible two-year-old children attending funded ELC provision across Scotland, although there are significant similarities between the two. The cohort is also relatively small as a result and some sub-groups (such as parents with particular educational qualifications) are particularly so.

The results from Phase 1 will act as a baseline for assessing the impact of expanded ELC provision on eligible two-year-olds through comparison with data collected in later phases of the evaluation. As there is not yet any comparative data, this report has been descriptive in nature - summarising the data collected and identifying some basic relationships between variables. It has not attempted to provide a comprehensive analysis of the relationship between use of funded ELC and child or parent outcomes. Furthermore, the analysis has been bivariate – examining the relationship between two variables at a time. As such, the well documented and often powerful influence of socio-economic background on outcomes and experiences has not consistently been controlled for and some of the relationships described may be attributed to this effect. For these reasons, and those cited above, results should be interpreted with caution.

Despite these methodological caveats, the data nevertheless provide an important initial view of the characteristics, experiences and outcomes of eligible parents and children who are receiving 600 hours of funded early learning and childcare when the child is aged two.

The families of eligible two-year-olds in the cohort are, as may be expected given the eligibility criteria, were more likely to be experiencing varying levels of socio-economic difficulties. Half (49%) were in households amongst those with lowest

[32] https://www.mygov.scot/childcare-costs-help/funded-early-learning-and-childcare/

10% (decile) of equivalised household incomes[33] (having an annual income of less than £9701) and a similar proportion (47%) lived in areas amongst the 20% most deprived in Scotland. In addition, parents in the cohort had lower levels of qualifications than parents of two-year-olds in the general population. Each of these are known to be key factors associated with poorer child development outcomes.

For most parents, the ELC setting attended by their child was accessible – almost two-thirds could make the journey within 10 minutes. Whilst settings were less accessible for parents in rural areas, half of these parents were still within 10 minutes' travel. Parents were routinely engaging with settings. The most common forms of engagement were those perhaps most expected: visiting the child's room and/or discussing the child's progress with staff. However, a small number of parents – a little more so amongst those living in more deprived areas - are also engaging in other ways including receiving advice about money and learning useful new skills – each potentially important in achieving greater parenting efficacy. Parents also recognised the benefits of ELC for their children including through supporting their social and educational development.

With the exception of gross motor development, only a minority of children were deemed to be on schedule in relation to the developmental domains covered by the Ages and Stages Questionnaire. Levels of expected development were lowest in relation to problem solving skills. As is commonly found in a wide range of research on child health and development, boys consistently fared worse than girls and children living in more deprived areas had poorer development than those in less deprived areas.

The pattern for social, emotional and behavioural development, as measured by the Strengths and Difficulties Questionnaire, was similar. Overall, using the total difficulties scale, less than half of children scored in the close to average range. This was also the case for the hyperactivity and peer problem domains. However, in relation to emotional symptoms and conduct problems, upwards of two-thirds of children had scores close to average. Again, boys and children from more disadvantaged circumstances had poorer outcomes on this development measure, though not consistently across all domains.

As may be expected, there was a clear relationship between ASQ and SDQ scores. Children whose development was deemed as requiring further assessment on the ASQ tended to have higher SDQ total difficulties scores. Although largely evident across all ASQ domains, the relationship was particularly strong for communication and personal-social. This suggests that children with poorer development experience this across multiple domains. Therefore, to improve such outcomes,

[33] Equivalised household income adjusts household income according to the typical income requirements for the number of people in the household. The OECD adjustment has been used in this case, where household income is divided by a household size factor, which is the sum of 0.67 for the first adult in the household, 0.33 for each subsequent adult or child aged 14 or above, and 0.20 for each child aged 13 or below. Cut points for the equivalised income deciles have been taken from a national survey of people in households in Scotland, the Scottish Health Survey 2017.

ELC settings need to be equipped to provide a range of support addressing these multiple needs.

Regular engagement in home learning activities such as parent-child reading is known to have a positive influence on children's development. Participation in such activities was common for almost all children in the cohort. However, not all children had been engaged in these activities to the same extent with boys, children from more deprived areas and those in single parent households being slightly less likely to have done so.

For many parents, the expansion appears to offer a firm opportunity to take up employment or increase their hours. Around one-third of parents who were not working agreed one of the reasons for that was a lack of affordable, convenient, good quality childcare. Similarly, a little over a third of parents who were working agreed they would work more hours if they could afford good quality childcare which was reliable, convenient and affordable.

Parents also identified a range of other benefits from having their child in ELC including feeling happier, less stressed and being able to think about what they might do in the future. Many also indicated it had allowed them to look for work or undertake study or training. As these latter activities are key parent outcomes of the expansion programme, this presents an already positive position upon which to build.

Appendix A – SSELC Partnership

The Scottish Study of Early Learning and Childcare (SSELC), although led by the Scottish Government, is a collaborative research project that has drawn on the invaluable expertise of a number of individuals and organisations throughout Scotland and beyond, including:

Local Authority Early Years Leads

Care Inspectorate

Early Years Scotland

Education Scotland

National Day Nursery Association

NHS Health Scotland

Scottish Childminding Association

Professor Aline-Wendy Dunlop, University of Strathclyde

Professor Alison Koslowski, University of Edinburgh

Professor James Law, University of Newcastle

Professor James Lewsey, University of Glasgow

Dr Louise Marryat, University of Edinburgh

Dr Christine Stephen, University of Stirling

Appendix B – Supplementary tables

Table B1: Average duration of a one-trip journey from home to the setting by area deprivation

	Most deprived 20%	Other areas	All
	%	%	%
0 to 5 minutes	37	37	36
6 to 10 minutes	25	28	27
11 to 15 minutes	20	18	18
16 to 20 minutes	11	12	11
21 to 30 minutes	6	5	6
more than 30 minutes	2	1	1
Unweighted base	*189*	*217*	*414*

Base: All respondents (parent survey)

Table B2: % of parents who participated in various activities at child's nursery by highest qualification of respondent

	None	Standard Grade, National 3, 4 or 5, or equivalent	Higher Grade or equivalent	HNC, HND or equivalent	Degree or equivalent
Visited your child`s room	93	93	94	95	88
Attended a parents evening or information meeting	24	34	56	44	30
Attended another type of nursery event	28	39	54	45	40
Helped out or offered to help out in the nursery including on a trip or with a nursery event	15	16	24	10	15
Stayed and played with your child	50	56	66	59	55
Discussed your child`s progress with her / his keyworker or another member of staff	83	80	91	88	87
Talked to someone about how to support your child`s learning at home	30	36	56	41	39
Spoken to someone about money or your welfare rights	2	6	9	8	6
Received help with transport to and from the nursery	2	4	-	4	1
Had support with food or clothing	7	5	9	4	1
Learned a new skill such as cooking	4	3	6	4	4
None of these	2	3	-	-	-
Unweighted base	*46*	*147*	*68*	*78*	*67*

Base: All respondents (parent survey)

Table B3: ASQ communication domain score by how often child sleeps through the night and whether ever breastfed

	How often child sleeps through the night without waking or needing to be comforted					Whether child ever breastfed	
	Never	1-2 times a week	3-5 times a week	6 times a week	Every night	Yes	No
	%	%	%	%	%	%	%
Further assessment may be needed	40	46	30	30	37	40	36
Monitoring suggested	17	13	15	23	19	13	19
Development appears on schedule	43	41	55	47	44	47	45
Unweighted base	*77*	*54*	*74*	*43*	*162*	*161*	*243*

Base: All children (keyworker observations)

Table B4: SDQ emotional symptoms domain score by child's sex and area deprivation

	Male	Female	Most deprived 20%	Other areas
	%	%	%	%
Close to average	81	78	82	78
Slightly raised	7	7	6	7
High	4	6	4	6
Very high	8	9	8	9
Unweighted base	*296*	*266*	*256*	*293*

Base: All children (keyworker observations)

Table B5: SDQ conduct problems domain score by child's sex and area deprivation

	Male	Female	Most deprived 20%	Other areas
	%	%	%	%
Close to average	68	70	66	70
Slightly raised	13	9	13	10
High	7	8	8	7
Very high	12	13	13	13
Unweighted base	*297*	*266*	*256*	*294*

Base: All children (keyworker observations)

Table B6: SDQ total difficulties score by how often child sleeps through the night

	How often child sleeps through the night without waking or needing to be comforted				
	Never	1-2 times a week	3-5 times a week	6 times a week	Every night
	%	%	%	%	%
Close to average	45	45	44	58	38
Slightly raised	18	22	33	26	26
High	18	20	11	7	16
Very high	18	13	12	9	21
Unweighted base	*77*	*55*	*73*	*43*	*160*

Base: All children (keyworker observations)

Table B7: Child's general health by single parent/couple household

	Single parent	Couple household
	%	%
Very good	56	58
Good	33	31
Fair	10	10
Bad	1	1
Very Bad	0	1
Unweighted base	*220*	*195*
Base: All respondents (parent survey)		

Table B8: Parental concerns about how child talks by area deprivation and single parent/couple household

	Most deprived 20%	Other areas	Single parent	Couple household
	%	%	%	%
No	68	65	72	62
A little	19	17	19	17
Yes	12	18	10	21
Unweighted base	*196*	*219*	*221*	*195*
Base: All respondents (parent survey)				

Table B9: Parental concerns about what the child understands by area deprivation and single parent/couple household

	Most deprived 20%	Other areas	Single parent	Couple household
	%	%	%	%
No	84	85	85	84
A little	12	9	9	11
Yes	5	7	6	5
Unweighted base	*196*	*220*	*221*	*196*
Base: All respondents (parent survey)				

Table B10: How often child sleeps through the night by area deprivation

	Most deprived 20%	Other areas
	%	%
Never	20	19
1-2 times a week	14	12
3-5 times a week	18	18
6 times a week	8	12
Every night	40	39
Unweighted base	*193*	*221*
Base: All respondents (parent survey)		

Table B11: Whether child ever breastfeed by area deprivation

	Most deprived 20%	Other areas
	%	%
Yes	40	41
No	60	59
Unweighted base	*194*	*213*
Base: All respondents (parent survey)		

Table B12: Parent's economic activity by area deprivation

	Most deprived 20%	Other areas
	%	%
Working 30 or more hours a week (including if currently on leave or sick)	5	16
Working fewer than 30 hours a week (including if currently on leave or sick)	24	18
On maternity/parental leave from an employer	3	1
Looking after home or family	68	71
Waiting to take up paid work already obtained	1	0
Out of work and looking for a job	10	7
Out of work, because of long-term sickness or disability	10	9
On a Government training or employment scheme	1	0
In full-time education (including on vacation)	4	6
In part-time education (including on vacation)	1	1
Wholly retired	-	1
Not in paid work for some other reason	15	8
Unweighted base	*195*	*218*
Base: All respondents (parent survey)		

Table B13: Parent's general health by single parent/couple household

	Single parent	Couple household
	%	%
Very good	23	24
Good	38	38
Fair	29	27
Bad	8	9
Very Bad	1	2
Unweighted base	*221*	*196*
Base: All respondents (parent survey)		

Table B14: % of parents who participated in various activities at child's nursery by highest qualification of respondent

	None	Standard Grade, National 3, 4 or 5, or equivalent	Higher Grade or equivalent	HNC, HND or equivalent	Degree or equivalent
	%	%	%	%	%
Very good	28	21	15	29	29
Good	38	40	40	36	38
Fair	28	29	26	29	25
Bad	4	9	13	5	7
Very Bad	2	1	6	-	-
Unweighted base	*47*	*147*	*68*	*78*	*68*
Base: All respondents (parent survey)					

Table B15: % agreeing activities done and perceived change in feelings because of child being in nursery by area deprivation

	Most deprived 20%	Other areas
	%	%
Because child is in nursery, able to think about what may do in the future	69	65
Because child is in nursery, have been feeling less stressed	62	60
Because child is in nursery, have been able to work or look for work	40	43
Because child is in nursery, have been able to study or improve work-related skills	27	26
Unweighted base	*193*	*211*
Base: All respondents (parent survey)		

How to access background or source data

The data collected for this social research publication:
☐ are available in more detail through Scottish Neighbourhood Statistics

☐ are available via an alternative route

☒ may be made available on request, subject to consideration of legal and ethical factors. Please contact socialresearch@gov.scot for further information.

☐ cannot be made available by Scottish Government for further analysis as Scottish Government is not the data controller.

The views expressed in this report are those of the researcher and do not necessarily represent those of the Scottish Government or Scottish Ministers.

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St Andrew's House
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ISBN: 978-1-83960-049-4 (web only)
Published by the Scottish Government, August 2019

Produced for the Scottish Government by APS Group Scotland, 21 Tennant Street, Edinburgh EH6 5NA
PPDAS618510 (08/19)