
THE EARLY YEARS TRANSITION & SPECIAL EDUCATIONAL NEEDS (EYTSEN) PROJECT

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Introduction

The Department for Education and Skills (DfES) commissioned this investigation into aspects of special educational needs (SEN) in children between the ages of 3 and 6 years (from pre-school to the end of Year 1 in primary school). This study uses a range of information to identify children who may be 'at risk' of developing SEN in terms of either cognitive or social behavioural development and investigates links with a variety of child, parent and family characteristics. It also describes variations in the policies and provision offered by different pre-school centres and schools designed to support children with SEN. The Early Years Transition and Special Educational Needs (EYTSEN) study builds on data collected as part of a larger, longitudinal study of pre-school provision (EPPE).¹

Key Findings

- A third of the sample showed low cognitive attainment at entry to pre-school. By entry to primary school this figure had dropped to a fifth of the sample, this suggests that preschool has a positive impact on young children's cognitive development. This positive impact remains evident at the end of Year 1.
- Those children in the sample who had little or no pre-school experience ('home' children) were more likely to be 'at risk' of SEN in terms of their cognitive development, even taking into account this group's higher levels of multiple disadvantage. The findings suggest that pre-school can be an effective intervention for the reduction of SEN, especially for the most disadvantaged and vulnerable groups of young children.
- Integrated/combined centres, local authority day centres and playgroups are most likely to have children 'at risk' of SEN on their roll. This may reflect the higher numbers of disadvantaged groups in the areas served by these centres. Understandings of what constitutes SEN varies in some settings and poor cognitive development may not always be recognised as constituting a need in pre-school.
- The results suggest that certain forms of provision may be of particular benefit to children who are 'at risk' of SEN for different reasons. For those 'at risk' of SEN in terms of poor cognitive development, integrated centres and nursery schools, were seen to be particularly beneficial, and for those 'at risk' of SEN in terms of poor peer sociability were integrated centres, nursery classes and playgroups were particularly beneficial.
- Due to the variable use of 'systems' for identifying children with SEN across the different types of pre-school, some children 'at risk' of SEN may go unidentified and may, therefore, miss the opportunity for early interventions in these forms of provision.

¹EPPE : The Effective Provision of Pre-School Education Project is a major longitudinal study (1997-2003) of a national sample of young children's progress and development through pre-school and into primary school until the end of Key Stage 1. For more information on this study contact EPPE Office, Room 416, The Institute of Education, University of London on 0207 612 6219.

- Children who move out of 'at risk' in terms of their cognitive development were more likely to have attended high quality pre-school centres than those that moved into 'at risk' status. High quality pre-school centres may, therefore, be seen as an effective intervention that can help improve cognitive development and thus provide more vulnerable children with a better start at primary school.
- The majority of parents were satisfied with the support their children were given for SEN, but where they were dissatisfied, they wanted more learning support on an individual basis.

Aims of the research were to:

- 1 examine the impact of pre-school on children who may be 'at risk' of SEN.
- 2 describe the characteristics of children who may be 'at risk' of SEN.
- 3 explore the distribution of 'at risk' children amongst different types of pre-school providers.
- 4 describe patterns of progress and development from age 3 to 6 years.
- 5 describe practices in identifying and supporting SEN.
- 6 examine the relationship between pre-school centre quality characteristics and the progress and development of different 'at risk' groups of young children.

In addition to this the study examined

- 7 parents' perceptions of their children's SEN.

Methods

The EYTSSEN study builds on a longitudinal national research study (EPPE) that follows the developmental progress of approximately 2,800 children from the age of 3+ across England². EPPE used both qualitative and quantitative methods (including multilevel modelling) to explore the relationship between the quality of pre-school settings, their pedagogy³ and child, family and home environment characteristics

² The full design of EPPE is explained in EPPE Technical Paper 1 (Sylva et al 1999).

³ Researching Effective Pedagogy in the Early Years DfES Research Brief No.356 June 2002.

which contribute to effective cognitive and social/behavioural development in children.

The EPPE sample was recruited from 141 pre-school centres drawn from the main providers (local authority day nursery, integrated/combined centres, playgroups, private day nurseries, nursery schools and nursery classes) experienced by the majority of under 5s. At entry to school a sample of approximately 300 children who had no pre-school experience (the home group) were recruited into the study.

The EPPE research collected a range of information from a variety of sources in order to answer the research questions including:

- assessments of and reports on children's cognitive and social behaviour development (at entry to pre-school, primary school and the end of Year 1).
- interviews with parents at entry to the study and a follow-up questionnaire when the children were in primary school. The follow-up questionnaire included a section specifically on 'special educational needs'.

The EYTSSEN research recognises that the term special educational needs when applied to very young children is a contentious one. EYTSSEN has sought to explore the notions of 'special educational needs' from a number of perspectives: standardised assessment data of children's cognitive attainments, measure of social/behavioural development from teachers and parents' reports.

Definition of 'at risk' of developing special educational needs

The description 'at risk' is sometimes used in child protection contexts. However, here it is used in a different context, namely in the identification of children 'at risk' of developing SEN as defined by Section 312 of the Education Act 1996.

Using information collected as part of the EPPE research, the EYTSSEN study aimed to identify children who might be considered 'at risk' of developing special educational needs for cognitive development, behavioural development and both (multiple risk) at different stages of their early years schooling. The research monitored children to see if they *remained in or moved out* of 'risk' up to the end of Year 1. The assessment data collected was used to form a series of 'cut-offs', and those children in the sample who scored below these cut-offs were identified as 'at risk' of developing SEN in terms of either poor cognitive or poor social behavioural development). For full details of the categories used

see EYTSSEN Technical Paper 1⁴ or the DfES research report.

The study sought to illuminate the factors (child, family and home environment) that might 'protect' children from developing SEN. It provides descriptions of the practices and provision most commonly available to children both in pre-school and school.

The following sections give the main findings of the research in relation to the 7 identified aims:

1 The impact of pre-school on children 'at risk' of SEN

One-third of children showed low cognitive attainment at entry to pre-school and could be considered 'at risk' of developing SEN in relation to national norms. By the start of primary school the proportion of children with low cognitive attainment identified as 'at risk' in national comparisons had reduced to one in five. This is an indication of improvement for low attainers and suggests a positive impact of pre-school on young children's cognitive development.

A 'valued added' analysis which investigates the amount of 'progress' different groups of children made during the pre-school period, indicates that the experience of pre-school over a longer period of time has a positive impact on cognitive attainment. This links with findings from the EPPE project which showed that children attending full-time provision made no more 'gains' than those attending 'part-time' provision. It would appear that the 'duration' of pre-school over an extended period is important for cognitive gains.

Children who made an earlier start (between 2 and 3 years) at pre-school had higher cognitive attainment than others at age 3. This advantage remained at entry to school. On average children identified as 'at risk' in the cognitive assessments at entry to pre-school were likely to have started pre-school at a later age. However, a very early start (i.e. below 2 years) at pre-school was weakly associated with increased risk for Anti-social/worried/upset behaviour.

2 Describe the characteristics of children 'at risk' of SEN

Research has consistently indicated that there are strong associations between certain factors (such as low SES, low income, mother's educational level, etc.) and children's poor cognitive attainment at school.

However, relatively few large-scale research studies have explored these associations in relation to concepts of 'at risk' status and definitions of SEN at different ages, and changes in 'at risk' status over time.

The parent, family and home characteristics of children are inter-related and causal attributions cannot be made. For instance the higher incidence of 'at risk' status amongst children whose mothers reported they were 'never married, single parent', is also likely to reflect other factors, including younger maternal age at giving birth, lower qualification levels, and reduced employment levels for this group. The findings indicate that child and parental factors are more strongly associated with children's cognitive outcomes than with their social/behavioural development.

At entry to pre-school children from minority ethnic groups and boys were slightly over-represented in most of the 'at risk' categories. Pakistani and Bangladeshi children were more likely to be identified as 'at risk' for the cognitive and Peer sociability categories, and Black Caribbean children in the Anti-social/worried/upset categories. Also children who did not have English as their first language (EAL children), showed a higher incidence of identification of cognitive 'at risk' status at entry to pre-school. The gender gap widened at the end of Year 1 for most outcomes.

Children identified as 'at risk' for cognitive measures were more likely to be from a large family, to be of low birth weight or premature, to have mothers with no qualifications, and to be of lower socio-economic status. Mother's qualification levels showed a strong link with 'at risk' status for all cognitive measures, with children whose mothers reported they had no qualifications most likely to be identified as 'at risk'. Many of the above factors were also associated with social/behavioural 'at risk' but the associations were weaker. An index of 'multiple disadvantage' was created to explore links with 'at risk' status. Children who experienced 'multiple disadvantage' showed a very strong relationship with 'at risk' status for all cognitive and some behavioural measures.

The EPPE project developed an index to measure the quality of the home learning environment (HLE). A variety of measures showed a significant link with cognitive attainment and to a lesser extent, with social/behavioural development. For example, reading to child, teaching songs and nursery rhymes, painting and drawing, playing with letters and numbers, visiting

⁴EYTSSEN Technical Paper 1 : Special educational needs across the Pre-School Period. Available from the EPPE office (0207 612 6219).

the library, teaching alphabet, teaching numbers were all associated with higher cognitive scores and could be viewed as 'protective' factors in reducing incidence of SEN. HLE was only moderately associated with mother's educational level or family SES ($r=0.3$).

The home group (those children with little or no pre-school experience) consistently showed a propensity for SEN on all cognitive measures and peer sociability. It should be noted that the home children as a group were more socially disadvantaged (lower parental SES, from larger families, more mothers with no qualifications etc.). Even taking into account the impact of their higher levels of multiple disadvantage they still demonstrated lower attainment and were proportionately more likely to be 'at risk' of SEN. This suggests that pre-school can be an effective intervention for the reduction of SEN, especially for the most disadvantaged and vulnerable groups of young children.

3 Exploring the distribution of 'at risk' children amongst different type of pre-school providers

Pre-school centres vary in the characteristics of the children they serve, for instance those in private day nurseries on the whole were more socio-economically advantaged than those in other forms of provision. The EYTSEN study sought to establish whether certain types of provider are more likely than others to be used by the parents of children who were classified as 'at risk' in cognitive or social behavioural terms.

Private day nurseries are less likely to serve children at cognitive 'risk'. By contrast, the majority of children in integrated centres were identified as 'at risk', reflecting the higher numbers of disadvantaged groups in areas served by these centres. Fairly substantial proportions of children from local authority day care centres and playgroups were also identified as 'at risk' in cognitive attainment.

For social behavioural measures more children in integrated centres were classified as 'at risk' followed by nursery classes and playgroups. For Anti-social/worried/upset we find that significantly more children in local authority day nurseries are classified as 'at risk' followed by integrated centres.

By the end of Year 1 children from integrated centres were still more likely to be identified as 'at risk' but the proportion had substantially reduced. The majority of children from integrated centres moved out of 'at risk' status by the end of Year 1.

At interview centre managers were asked about the identification of SEN in their centres. The reporting of SEN differed significantly across pre-school types with managers in the maintained sector: nursery classes, local authority day centres, nursery schools and integrated centre provision reported higher incidences of SEN than private day nurseries or (lowest of all) playgroups. However there were no clear links between the proportion of 'at risk' children in a centre (as identified by standardised assessments and parental report) and the likelihood that managers reported they had any SEN children on roll. In particular quite high proportions of 'at risk' children were found to attend playgroups but only around half of playgroups reported they had any children with SEN on roll. This result suggests that understandings of what may constitute SEN in some settings may vary and that poor cognitive development may not always be recognised as constituting a need in pre-school.

4 Patterns of progress and development from pre-school to end of Year 1

We also explored whether changes in children's 'at risk' status were associated with the type of pre-school they attended. Children who attended integrated centres or nursery schools were more likely to move out of 'at risk' status for cognitive development, especially in pre-reading. For behavioural development, in all forms of provision it was found that children moved *out of* than *into* 'at risk' status for Anti-social/worried/upset behaviour, but integrated centres, playgroups, nursery classes and nursery schools showed greater movement of children out of 'risk' for peer sociability.

These results suggest that certain forms of pre-school provision may be of particular benefit to children who are 'at risk' or more vulnerable in terms of low cognitive attainment and poor social behaviour. Integrated centres and nursery schools show the most positive impact for movement out of risk for several measures, especially for cognitive outcomes. Integrated centres, nursery classes and playgroups show positive movement for the social behavioural outcome Peer sociability.

Once children had moved into primary school we analysed SEN status as reported by class teachers. Just under thirty percent of children (for the whole sample) were identified as showing SEN. Children who attended pre-school were less likely to be reported as having SEN by teachers (1 in 4) compared to the home group (4 in 10). The characteristics of those children with recorded SEN in school were very much in line

with those reported at pre-school: i.e. high levels of multiple disadvantage.

5 Practice in identifying and supporting SEN

Centre Managers were interviewed to investigate variations in policy and practice relevant to SEN. Centre managers from the whole of the maintained sector reported having systems for identifying children who had special educational needs. Far fewer private day nurseries and fewer still playgroups reported having systems. This suggests that some children 'at risk' of special educational needs may go unnoticed and miss the opportunity for early intervention in these forms of provision.

The most frequently used identification systems were observation schedules and consulting with professionals and parents. These two findings raise further questions regarding the extent to which good practice can be shared, across the sector, in the use of observations schedules and having access to 'outside professionals'.

It is particularly important that pre-schools have good skills in liaising with parents because children's special educational needs may only become apparent for the first time when children enter pre-school.

Centre managers most commonly reported supporting SEN children by consulting with other professionals for guidance (most common in integrated centres), meeting with parents and using Individual Education Plans (IEP) from the Code of Practice.

All centres in the maintained sector reported using the Code of Practice, IEPs or having a nominated person responsible for SEN (SENCO) however, this was not universal in the voluntary sector.

Once in primary school, children identified as a concern for SEN, were most likely to be given support through small group work and individual attention. Around 10 per cent of children received support in a special class and 1 per cent attended off-site provision. Only 2 per cent overall had a full statement (this was 4% for the home group). It is interesting to note that over two thirds of children identified as 'at risk' for reading by EPPE assessments (in pre-school) were also reported to have SEN by teachers in Year 1. This figure was somewhat lower for mathematics (59%).

6 The relationship between pre-school centre quality characteristics and the progress and development of different 'at risk' groups

An important question for the EYTSSEN research was whether higher quality pre-school provision helps to promote the cognitive and social behavioural development of young children.

Information from observations to assess the 'quality' of pre-school centres using standardised assessment instruments⁴ was analysed and a significant link between higher quality and better child outcomes identified. Analyses show that children in 'quality' pre-schools make more cognitive progress (even when accounting for all background factors). Quality pre-school gives children a better start to school⁵.

The EPPE data also indicates that integrated centres and nursery school provision have the highest scores on pre-school environmental quality, while playgroups, private day nurseries and local authority centres have lower average scores.

The EYTSSEN analyses shows that children who moved out of cognitive 'at risk' status attended higher quality provision than those who moved into 'at risk' status. This pattern was repeated for early reading skills and early number concepts. Higher quality pre-school provision is significantly associated with greater movement out of 'at risk' status for cognitive measures, whereas poorer quality is associated with more movement into 'at risk' status by entry to primary school. Trends were less clear for social behavioural outcomes.

A number of aspects of pre-school quality continued to show an impact on children's development at the end of Year 1. The quality of provision for early literacy skills was particularly related to later reading attainment. Similar patterns were found for early number concepts and later mathematical attainment. This was also replicated for all social/behavioural outcomes.

It appears that pre-school centre quality has a positive role in promoting cognitive development for children who are at the lowest end of the attainment spectrum at entry to pre-school, and that high quality provision may be seen as an effective intervention, which can help improve cognitive development, and thus provide more vulnerable children with a better start at primary school.

⁴ The Early Childhood Environment Rating Scales: Revised (ECERS-R) and Extension (ECERS-E).

⁵ EPPE Technical Papers 8a, 8b and 6.

7 The Parents' Perspective

The EYTSSEN study investigated parental perceptions of special during pre-school and school⁶. This paper, whilst not directly addressing the main research questions, has provided a valuable insight into the issues of early recognition and the support given to children who have different special educational needs.

Some of the findings in this paper are worth noting as they resonate with findings in other Technical Papers. For instance:

Parents of 'home' children were less likely to report their children being in need of help than parents of pre-school children. However, when the home children were considered for their 'at risk' SEN status there were proportionately far more home children in this group. While the identification of a special educational need was most likely to occur within the household, children attending pre-school were more likely to have their special educational needs identified because of the high incidence of teachers identifying children who were of concern.

Boys were more likely than expected (as reported by parents) as having learning difficulties, be hyperactive and have eating problem than girls.

Speech therapy was the most common form of 'outside' support available to children during both pre and school periods.

Parents who gave support at home were most likely to assist with reading difficulties. The majority of parents were satisfied with the support their children were given for SEN but where they were dissatisfied they wanted more learning support given on an individual basis.

Conclusion and Policy Implications

The EYTSSEN research is unique in its longitudinal focus and follow up of young children's cognitive and social behavioural development.

Overall, the proportion of children 'at risk' of SEN in terms of cognitive development reduced significantly by entry to primary school (from 1 in 3 to 1 in 5). Moving out of 'at risk' status was related to higher quality pre-school provision.

Home children are significantly more likely to be identified as at risk when they start primary school than children who attended pre-school centres. Even

when account is taken of the higher levels of disadvantage amongst the home group, the EYTSSEN study indicates they are more likely to be 'at risk'. Results therefore indicating that pre-school helps to provide a better start to school, especially for more vulnerable groups of children.

The positive impact of pre-school remains evident at the end of Year 1. These findings have important implications for the identification and provision for children with SEN. Children who do not attend pre-school or who have had little or poor quality pre-school experience remain more vulnerable to SEN. Good pre-school experience (in terms of quality and effectiveness) can be seen to offer continuing benefits during the early years.

These findings have some important policy implications and recommendations that can be summarised as:

- Policies that promote active parental involvement in learning and play activities at home, such as some local Sure Start programmes can help close the attainment gap in young children.
- Policies and strategies which increase the availability, uptake and quality of pre-schooling and are likely to play a significant role in providing children with a better start to school and reducing the risk of later SEN. There are many implications for staff training and development connected with the identification and support of children 'at risk' of SEN in pre-school settings.
- All pre-school centre staff should be given training about the quality characteristics of pre-school settings, ways of evaluating quality and strategies for raising quality.
- Pre-school and school workers/teachers should be aware that boys may be at increased risk of developing SEN for cognitive development and aspects of social development. The development of programmes which seek to focus on the specific needs of boys, as learners, linked with appropriate staff development may have long-term benefits and help reduce the gender gap in SEN.
- Investment should be made in integrated settings (that fully combine education and care) and nursery schools as these provide more positive benefits for children 'at risk' of developing SEN.

⁶ EYTSSEN Technical Paper 3 SEN in the Early Years :The Parents' Perspective.

References

Sylva, K., Sammons, S., Melhuish, E. Siraj-Blatchford I & Taggart B. (1999) Technical Paper 1 An Introduction to the EPPE Project. Institute of Education. University of London.

Related Papers

EPPE Technical Papers 1 to 10

EYTSN Technical Paper 1: Special Educational Needs across the Pre-school Period

EYTSN Technical Paper 2: Special Educational Needs in the Early Primary Years

EYTSN Technical Paper 3: Special Educational Needs in the Early Years: The Parents' Perspective

All available from the EPPE office
(0207 612 6219) at the Institute of Education

These technical papers have been summarised in the EYTSN Final Report available from the DfES Publications Centre:

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The Report and Brief can also be downloaded, free of charge, from the DfES Research website:
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