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The impact of Sure Start Local Programmes on seven year olds and their families

By the National Evaluation of Sure Start Team

Sure Start Local Programmes (SSLPs), the forerunners to Sure Start Children's Centres, aimed to support young children and their families by integrating early education, childcare, healthcare and family support services in disadvantaged areas. The programmes' objectives were to improve the health and well-being of families and young children, so that the children would have a greater opportunity to do well in school and later in life. This study investigates child and family functioning in over 5000 families recruited from 150 SSLP areas, and makes comparisons with children and families in similarly disadvantaged areas not having a SSLP in order to evaluate whether there are effects associated with SSLPs.

Key Findings

All findings are reported after adjusting for a wide range of family, area and primary school background characteristics. Comparisons between seven year old children and families from SSLP areas and those living in similar non-SSLP areas revealed beneficial effects associated with living in a SSLP area.

In summary, significant effects of SSLPs emerged for four out of 15 outcomes, two of which applied across the board and two of which applied to sub-populations. For the whole population, mothers in SSLP areas relative to their counterparts in non SSLP areas reported:

- engaging in less harsh discipline;
 - providing a more stimulating home learning environment for their children;
- additionally for sub-populations, mothers in SSLP areas reported:*
- providing a less chaotic home environment for boys (not significant for girls);
 - having better life satisfaction (lone parent and workless households only).

Additional evidence of beneficial SSLP effects emerged for three of eight repeatedly-measured outcomes when looking at change in parent and child functioning between 3 and 7 years. Mothers in SSLP areas relative to those residing in comparison areas:

- showed a greater improvement in the home learning environment;

- reported a greater decrease in harsh discipline;
additionally for sub-populations, mothers in SSLP areas reported:
- greater improvement in life satisfaction (lone parent and workless households only).

The effects for lone parent and workless households can be regarded as evidence that SSLPs were being successful in affecting 'hard to reach' groups within SSLP areas, which in the early stages of SSLPs had appeared to be challenging. No consistent SSLP effects for child development emerged at 7 years. There were no adverse effects associated with SSLPs, and all the beneficial effects appeared to apply to families at all levels of disadvantage and for all areas regardless of level of deprivation.

Background

The ultimate goal of Sure Start Local Programmes (SSLPs) was to enhance the life chances for young children growing up in disadvantaged neighbourhoods. Children in this type of neighbourhood are at risk of doing poorly at school, having trouble with peers and agents of authority (i.e., parents, teachers), and ultimately experiencing compromised life chances (e.g., early school leaving, unemployment, limited longevity). The children in SSLP areas were found to have low cognitive and language development at three years of age, being on average roughly one standard deviation below the population mean (NESS 2005). This indicates that the average child in an SSLP area was functioning at about the level of the 15th percentile which represents a very substantial developmental handicap. This is likely to have profound consequences not just for the children but for their families, communities, and for society at large.

SSLPs not only aimed to enhance health and well-being during the early years, but also to increase the chances that children entered school ready to learn, would be academically successful, socially successful in their communities and occupationally successful as adults. Indeed, by improving the developmental trajectories of young children at risk of compromised development, SSLPs aimed to break the intergenerational transmission of poverty, school failure and social exclusion. Such a strategy was a profound innovation for policy in the UK.

SSLPs were strategically situated in areas of high deprivation and they represented an innovative intervention unlike almost any other aiming to enhance the life prospects of young children in disadvantaged families and communities. One distinguishing characteristic was that the initiative was *area based*, with *all* children under five years of age and their families living in a prescribed area serving as the "targets" of intervention. This was seen as having the advantage that services (e.g. childcare, family support) within a SSLP area would be universally available, thereby avoiding stigma that may accrue from individuals being targeted. In the early years of SSLPs, by virtue of their local autonomy and in contrast to more narrowly-defined early interventions, SSLPs did not have a prescribed "curriculum" or set of services, especially not ones delineated in a "manualised" form to promote fidelity of treatment to a prescribed model. Instead, each SSLP had extensive local autonomy over how it fulfilled its mission through service

delivery.

From 2005 to 2006, fundamental changes were made in SSLPs, as they came under the control of Local Authorities and were operated as Sure Start Children's Centres. Service delivery was modified by making the guidelines for children's centres more specific about the services to be offered. Nonetheless there was still substantial variation among Local Authorities and areas within Local Authorities in the way the new children's centre model was implemented. This continued to pose challenges for evaluating their impact, as each SSLP or children's centre remained unique.

Methodology

In assessing the impact of SSLPs on child and family functioning over time, the impact study of the National Evaluation of Sure Start (NESS) has followed up over 5000 7-year-olds and their families in 150 SSLP areas who were initially studied when the children were 9 months, 3 and 5 years old. The 7-year-old study followed up a randomly selected subset of the children and families studied at younger ages.

The comparison group of non-SSLP children and their families, against which the NESS sample was compared, was selected from the entire Millennium Cohort Study (MCS) cohort. Their selection was based upon identifying and selecting children living in areas with similar characteristics to SSLP areas, but which did not offer SSLP services. This enabled comparisons amongst children and families from similar areas in order to detect possible effects of SSLPs on children and families.

Methodological Issues

Every study will have some methodological constraints. Here we summarise those that apply to this study and how we tried to mitigate them. The data for the NESS and comparison samples of 7-year-olds and their families were collected two years apart and by two different research teams. This makes attributing SSLP effects to SSLP exposure per se difficult as they could potentially reflect changes in communities or society more generally across the two-year period or could be the result of differences in measurement by the two research teams. We tried to mitigate this latter effect through close cooperation between teams and cooperation in staff training.

However, measures of educational achievement deriving from Key Stage 1 (KS1) assessments are free from problems linked to time of measurement or the differences between research teams in that KS1 assessments were completed by teachers independent of any research team, according to national measurement guidelines. Also the standardisation (or equivalisation) of KS1 scores by year of measurement further ensures the comparability of data across studies and years of measurement.

Missing data are unavoidable in a longitudinal study of this size, i.e., data that were not collected either because families could not be contacted or because of the decision of the funders not to follow up all those seen at 5 years of age when they were age 7. In order to counter possible bias due to missing data, comparisons between the 7-year-

olds and their families participating in the SSLP and the comparison group were conducted for three different but overlapping samples:

1. Those children/families interviewed at age 7 for both SSLP and the non-SSLP sample for whom *complete data* were available (i.e. no missing data whatsoever on measurements used in this report). These cases numbered 3,282 in the SSLP sample and 1,127 in the non-SSLP sample, but eliminating cases with missing data may result in non-random loss of data and possibly biased results. To compensate for this possibility two samples used imputation to replace missing data:
2. All those seen at age 7 whether or not there were complete data at age 7 (N=3,558 for SSLP, 1,436 for non-SSLP).
3. Those seen at 3 years old regardless of whether they were also seen at 7 years old (N=5,883 for SSLP, 1,879 for non-SSLP).

Imputation allows estimation of data for those lacking some data by using all other information on all individuals. In essence, it uses the statistical relations among all variables to calculate what a missing value might be, while taking into consideration the likelihood of error in such estimates.

Given that results could differ across these analyses and that each approach has both strengths and weaknesses, the decision was made that only SSLP effects (i.e., SSLP vs. non-SSLP) that proved significant across *all three sets* of analyses would be regarded as reliable and thus meaningful for presentation and interpretation in this report. This approach was taken as results that were significant across all three sets of analyses are the most reliable and suitable for policy planning.

Findings

After taking into consideration pre-existing family and area background characteristics, (as well as primary school characteristics for child outcomes), analyses comparing children and families living in SSLP areas and those living in similar non-SSLP areas revealed some beneficial SSLP effects related to family functioning and maternal well-being. This was the case when effects were evaluated with respect to child/family functioning when the children were age 7 and with respect to change over time in child/family functioning from age 3 (or 9 months for worklessness) until age 7. The complete list of outcome variables and their definitions can be found in the full report.

The Impacts of SSLPs When the Children Were Aged 7

Evaluation of SSLP effects involved 15 child/family functioning outcomes at age 7. As well as considering across the board effects, we also considered whether effects applied to children/families within SSLP sub-populations.

After taking into consideration pre-existing family, area and school characteristics, four positive effects of SSLPs emerged from these 15 outcomes at age 7, two of which applied to the whole population and two of which applied to sub-populations. For the

whole population, mothers in SSLP areas compared to their counterparts not living in SSLP areas, reported:

- (1) engaging in less harsh discipline;
 - (2) providing a more stimulating home learning environment for their children;
- additionally for sub-populations, mothers in SSLP areas reported:*
- (3) providing a less chaotic home environment for boys (not significant for girls);
 - (4) having better life satisfaction (lone parent and workless households only).

The results for sub-populations can be as important as those for the total population, and knowing about sub-population differences can inform the targeting of services. This is important as children's centre services are often targeted on the most vulnerable, and also service delivery may be targeted differently for specific sub-populations.

There were no consistent differences on either the four child educational development outcomes, four child social and behavioural outcomes or two child health outcomes.

In summary, significant positive effects of SSLPs emerged for four out of 15 outcomes, two of which applied to the population overall and two to sub-populations. These effects, for family functioning and maternal well-being, appeared to apply across the full range of SSLPs regardless of level of deprivation.

What is the Effect of SSLPs on Progress over Time?

Additional evidence of positive SSLP effects for the whole population emerged on three of eight repeatedly-measured outcomes when the focus of evaluation was on change in parent and child functioning between 3 and 7 years (or between 9 months and 7 years for workless household status). Mothers in SSLP areas relative to those residing in comparison areas:

- (1) showed a greater improvement in the home learning environment;
 - (2) reported a greater decrease in harsh discipline;
- additionally for sub-populations, mothers in SSLP areas reported:*
- (3) greater improvement in life satisfaction (lone parent and workless households only) than counterparts not in SSLP areas.

Note that there were only beneficial effects and no negative effects discerned in any of the analyses.

Are These Effects Applicable Across All 150 SSLPs?

It is important to know whether effects apply across all SSLP areas regardless of deprivation. This was checked by analysing differences in effects across all SSLPs and such analyses indicated that effects were similar regardless of level of area deprivation. Since the Millennium Cohort Study (MCS) does not include many children from the most extremely disadvantaged areas (stratum 5), NESS focused the comparative analysis on the other disadvantaged areas that are still within the 20% most disadvantaged areas in the country. In order to consider whether there might be a different impact for children

in stratum 5, the outcome data of the Sure Start children in the other disadvantaged areas (strata 2-4) were compared with the outcome data for the Sure Start children in the most extremely disadvantaged areas (stratum 5), taking account of the differences in other child, family, area and school variables that might affect outcomes. Children and families in stratum 5 appeared to be developing equivalently to those in strata 2-4 when taking their extra disadvantage into account. This suggests that the most disadvantaged groups benefitted in an equivalent way to the other groups. This finding is consistent with the interpretation that SSLP effects should generalise across all 150 SSLPs in this study, all of which were drawn from the first four waves of SSLPS, which were originally funded from before 2002.

Pre-school and Primary School Education

The main evidence for population-wide early years programmes affecting child development stems from research on the effects of high quality pre-school education, which has been found, repeatedly, to be associated with improved cognitive and social development (e.g. Sylva et al., 2010; Vandell et al., 2010; Melhuish 2011). While pre-school education was (and remains) a major part of what SSLPs (now children's centres) offered, it would also have been available to children in non-SSLP areas. Since 2004 free part-time pre-school provision has been available to every child from three years of age, and 95% of eligible children take up this offer (Statistical First Release, DfE June 2011²). Hence there are unlikely to be differences in the pre-school education experienced by the SSLP and non-SSLP samples, particularly as the quality of pre-school provision is equivalent in SSLP and non-SSLP areas (Melhuish et al., 2010). This equivalence of amount and quality of pre-school education experience across those living in SSLP and non-SSLP areas could well be responsible for the failure to detect SSLP effects on children at age 5 (apart from physical health measures) and at age 7. That is, it *could* be that developmental advantages that were identified for children in SSLPs at age 3 were not detected at age 5 (NESS, 2010) or at age 7 because almost all children, whether in SSLP areas or not, had access to pre-school education, which resulted in "catch up" for those children in non-SSLP areas.

In addition at the time of the 7-year-old assessments all children would have had approximately 3 years of primary school experience, which may also have contributed to an equalising of overall experience likely to affect development between children in the two study groups, given that they have had equivalent pre-school education experience. This interpretation is consistent with the evidence that high quality early childhood education and care (ECEC) (e.g. Melhuish, 2011) will shift the population curve for child outcomes, and this is the only type of early intervention for which evidence is currently available for shifting the population curve through enhancing the development of all children in the relevant population, rather than lifting the "tail" of the population through targeted intervention. Other types of intervention strategy have been found to be successful in helping targeted small groups of families with young children, notably well-implemented "manualised" parent support programmes (Barrett, 2010). Such programmes are sometimes used by Sure Start programmes, and they can help

² DfE, Statistical First Release 22nd June 2011:
<http://www.education.gov.uk/rsgateway/DB/SFR/s001009/index.shtml>

lift the tail of the population. Also there are examples of childcare in the first 3 years combined with parent support (e.g., Early Head Start; Love et al., 2002) that have also been found to have substantial impact for disadvantaged populations.

Conclusions

The NESS research team faced methodological challenges and these are outlined here and in more detail in the main report. These issues place some limits on the study's ability to afford strong causal inferences about effects of SSLPs on children and families. Early decisions not to undertake a randomised control trial and to double the number of SSLPs (reducing the opportunity to identify suitable comparison areas) meant that the evaluation had to use the MCS cohort as a source of comparison data. This resulted in a two year gap between SSLP and comparison data such that any SSLP-comparison group differences might be due to time effects. It is possible that the results might have been more positive or more negative if this two-year gap in data collection did not exist. This limitation was overcome by the research team with respect to education outcomes such as KS1 scores. Despite methodological challenges a great deal has been learnt over the years from the many reports provided by NESS, and these have clearly influenced policy. This report shows how some of those changes have had a positive impact, for instance on improving the reach and impact on the most vulnerable families, and there are no longer any negative effects associated with Sure Start programmes.

The results of this follow-up study of 7-year-old children and their families provide some support for the view that government efforts to support children/families via the original area-based approach to Sure Start paid off to some degree with parent outcomes, but not with regard to child outcomes. Since its early days Sure Start has evolved considerably, responding to research findings and both internal and external feedback. In particular, policy developments have clarified guidelines and worked to strengthen service delivery. While the results are modest they do indicate value in the work of Sure Start Children's Centres. Importantly, children's centres have been found to be immensely popular with parents and, as demonstrated by this evidence, they have been successful in reaching the parents who are likely to be the most disadvantaged. The success of SSLPs in engaging and supporting the poorest families without stigma means they provide an infrastructure that is well placed to engage the most vulnerable groups and support them effectively. Also the beneficial effects for parents persist at least two years after their last contact with Sure Start programmes; often social interventions do not have such a sustained impact and can suffer from "wash-out".

It is possible the beneficial effects on parenting and more effective home learning environments may produce improved child outcomes when the children are older. Other interventions that have affected parenting report long-term beneficial effects upon adolescent criminality and substance abuse (Olds et al., 1999). It may be that the parenting effects discerned by age 3 are too little too late to produce the improvements necessary for language development that could affect subsequent educational and social improvement. If child outcomes are to be enhanced the established Sure Start

infrastructure needs to give greater emphasis to services that will improve child outcomes, particularly language development and children's daily experiences, for the children served. In relation to this last point another NESS report (Melhuish et al., 2010) has shown that when Sure Start programmes provide high quality pre-school childcare, child language development can improve, and other research shows that improvements can be long-lasting and extend to educational and social outcomes. All this suggests that Sure Start Children's Centres are well-placed to provide improved integrated services that will help support the most disadvantaged children and families and in a way that can contribute to narrowing the gap between the children of disadvantaged and more advantaged families. However, they will need to focus more directly on improvements to young children's daily experience, which is a primary engine of child development, if they are to improve child outcomes.

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Additional Information

The full report can be accessed at <http://www.education.gov.uk/publications/>
Further information about this research can be obtained from
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This research report was commissioned before the new UK Government took office on 11 May 2010. As a result the content may not reflect current Government policy and may make reference to the Department for Children, Schools and Families (DCSF) which has now been replaced by the Department for Education (DFE).

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