THE IMPACT OF SURE START LOCAL PROGRAMMES ON CHILD DEVELOPMENT AND FAMILY FUNCTIONING: A REPORT ON PRELIMINARY FINDINGS

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by

The National Evaluation of Sure Start (NESS) Institute for the Study of Children, Families and Social Issues, Birkbeck University of London

The National Evaluation of Sure Start Team is based at the Institute for the Study of Children, Families & Social Issues, Birkbeck University of London, 7 Bedford Square, London, WC1B 3RA.

Core Team

Professor Edward Melhuish, Institute for the Study of Children, Families & Social Issues, Birkbeck (Executive Director)

Professor Jay Belsky, Institute for the Study of Children, Families & Social Issues, Birkbeck (Research Director)

Dr Alistair Leyland, MRC Social & Public Health Sciences Unit, University of Glasgow (Statistician)

Impact Module

Professor Edward Melhuish, Institute for the Study of Children, Families & Social Issues, Birkbeck (Director)

Professor Angela Anning, Department of Education, University of Leeds (Investigator)

Dr Zarrina Kurtz (Investigator)

Implementation Module

Professor Jane Tunstill, Department of Health & Social Care, Royal Holloway, University of London (Director)

Mog Ball (Investigator)

Pamela Meadows, National Institute of Economic & Social Research (Investigator)

Cost Effectiveness Module

Pamela Meadows, National Institute of Economic & Social Research (Director)

Local Context Analysis Module

Prof Jacqueline Barnes, Institute for the Study of Children, Families & Social Issues, Birkbeck (Director)

Dr Martin Frost, Birkbeck (Investigator)

Beverley Botting, Office of National Statistics (Investigator)

Support to Local Programmes on Local Evaluation Module

Prof Jacqueline Barnes, Institute for the Study of Children, Families & Social Issues, Birkbeck (Director)

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EXECUTIVE SUMMARY

A principal goal of Sure Start Local Programmes (SSLPs) is to enhance the functioning of children and families by improving services provided in the local programme areas. As a first step in assessing the impact of SSLPs on child and family functioning, the Impact module of the National Evaluation of Sure Start (NESS) is studying 9- and 36-month old children and their families in 150 SSLP areas and in 50 comparison communities (i.e. areas designated to become SSLP later). In 2003, home visits were carried out in more than 8000 families in the first 75 SSLP areas and 3000 families in 50 comparison, Sure-Start-to-be communities.

Data from the home visits were used to analyse the effect of SSLPs on a wide range of child, parenting, and family measures. These analyses revealed only one significant difference suggestive of a SSLP effect after taking into consideration a host of background factors that might make children and families in SSLP areas and in the comparison communities different from each other in the first place: Specifically, *in SSLP areas, mothers/principal carers were observed to treat the child in a warmer and more accepting manner than in comparison areas.* This effect is consistent with the broad goals of SSLPs.

In addition to determining whether there were differences, *on average*, between all the SSLP areas and the comparison communities on the multiple measures of child, parenting and family functioning examined, efforts were also undertaken to determine whether some communities produced children, parenting and family outcomes that were better than would be expected on the basis of a wide range of family and community background characteristics (e.g., family income, workless households in community). Evidence indicated, when such variation *within* both SSLP *and* comparison areas was considered, that *SSLP areas were more than twice as likely as comparison communities to show evidence of better-than-expected functioning across a set of 20 different outcomes related to child development and parenting*. Further work by the evaluation team is exploring what characteristics differentiate the more effective programmes from those having little effect. This work may be particularly useful for informing the future development of Sure Start Local Programmes. Initial attempts at exploring the characteristics of the more effective SSLP communities reveal that there are some area-level demographic characteristics associated with effective programmes, perhaps suggesting that SSLPs are more likely to be effective in somewhat less-deprived communities, but that variation in the implementation of SSLPs, as least as currently measured, does not appear to be systematically related to variation in programme efficacy. This latter topic requires additional work by the evaluation team.

In addition further work is ongoing in another 75 SSLP communities throughout 2004. The data collected from these communities will be added to that collected in 2003 to provide more extensive evidence of the possible effects of SSLPs upon children, families and communities. Hence the findings summarized so far can only be regarded as preliminary.

1.   INTRODUCTION

The ultimate goal of Sure Start local programmes (SSLPs) is to enhance the life chances of children less than four years of age growing up in disadvantaged neighbourhoods. It is known from demographic characteristics that the children and families in these communities are at risk for developing in ways that are less than optimal. This has profound consequences for the children, families and communities, and for society at large. Thus, SSLPs not only aim to enhance health and well-being during the early years, but to increase the chances that children will enter school ready to learn and prove to be academically successful in school, socially successful in their communities and occupationally successful when grown up. Indeed, by improving, early in life, the developmental trajectories of children known to be at-risk of compromised development, SSLPs aim to break the all-too-frequent intergenerational transmission of poverty, school failure and social exclusion.

With such ambitious goals, it is clear that the ultimate efficacy of SSLPs cannot be determined for quite some time and that children growing up in communities with SSLPs will need to be studied well beyond their early years before a final accounting of the success of SSLPs will prove possible. Nevertheless, by studying children and families in SSLPs during their opening years of life, it may well prove possible to detect evidence of early efficacy. The first phase of the Impact Study of the National Evaluation of Sure Start (NESS) has been designed with just this goal in mind. More specifically, in addition to following a large number of children (and their families) longitudinally, beginning at 9 months of age and then again when 3- and 5-years of age, the Impact Study incorporates into its research design a cross-sectional investigation of 9-month-olds and 36-month olds and their families. The primary purpose of this cross-sectional component was as a source of evidence for detecting early SSLP efficacy.

1.1 Purpose of this Report

The primary purpose of this report is to summarize the first examination of the data that have been collected that might shed light on this issue; a secondary purpose is to raise issues which merit consideration as the Impact Study goes forward. With respect to the primary purpose of this report, we present a report of preliminary findings related to the efficacy of SSLPs in fostering the well being of 9-month olds (who will be studied again at ages 3 and 5) and 36-month olds (who will only be studied once) and their families. The results to be reported must be regarded as preliminary because the data analysed to date represents only half of that to be collected in the 9- and 36-month cross-sectional phases of the Impact Study; the remaining data will be gathered during 2004. Thus, this report relates to the data collected up to the end of 2003 and allows the comparison of the functioning of over 7500 children and families living in 75 Round 1 and 2 SSLP areas with that of 2500 counterparts living in 50 communities that do not have up-and-running SSLPs at the time they were measured, but which are scheduled to have just such programmes in the very near future (i.e., Sure-Start-to-be communities).

1.2 A Critical Caveat

Everyone interested in the effects of SSLPs needs to recognise that the challenge of detecting effects of this major intervention during the early years is great. To begin with, it must be appreciated that it takes time for SSLPs to truly get off the ground; the most recent estimates from the Cost-Effectiveness module of NESS reveals that it is not until the third financial year of operation that most SSLPs are spending funds allocated to them to an extent indicating widespread effects on services. Second, effects of early intervention programmes often take time to emerge and depend upon multi-year exposure to programme services; the children and families whose data contribute to the investigation of preliminary findings have been living in communities that have only had programmes bedded down for about one year when studied. Third, it has often proven to be the case that the most important evidence of enduring effects of effective early interventions does not materialize until beyond the early years.

For these reasons readers of this report need to appreciate the critical distinction between evaluations reporting (1) no evidence of efficacy and (2) the lack of efficacy. That is, a conclusion that "no evidence of efficacy could be detected", should that prove to be the case with respect to SSLPs, is distinctly different from concluding that the programme is ineffective in realizing its goals of enhancing child development and family functioning. The critical distinction that must be kept in the forefront of the reader's mind is that between *detecting evidence* of efficacy and *lack of* efficacy. This distinction is particularly important in the context of the present report focused as it is upon an intervention that is far from well established in many places and in which only preliminary findings are under consideration—for children and families who have not been studied repeatedly over time. It is also possible that early evidence found in this very preliminary analysis might change when 2004 data is added to the 2003 data.

2.   RESEARCH DESIGN AND APPROACH

2.1 Sample

In order to gain early insight into the effects of SSLPs on child development and family functioning, potential study participants living in SSLP areas and similar areas scheduled to become SSLP areas were identified with the assistance of the Child Benefit Office of (initially) the Department of Works and Pension and (subsequently) the Inland Revenue. Potential participants were randomly selected from the Child Benefit Register. The recruitment goal of the entire cross-sectional study has been to recruit 12000 9-month-olds and 3000 36-month-olds and their families from the 150 SSLP areas, and 1,250 families with 9-month olds and 1250 families with 36-month olds from the 50 Sure-Start-to-be (i.e., comparison) communities by the end of 2004. Data collection proceeded in 75 Round 1& 2 SSLPs and 50 Sure-Start-to-be communities during 2003. Up to the end of 2003, data collection exceeded the intended target for sample recruitment, in that data on 6100 9-month-olds and 1800 36-month-olds and their families in Round 1 & 2 Scalps, and 1300 9-month-olds and 1400 36-month-olds and their families in Sure Start-to-be communities were collected. The response rate was 80.3% overall but only 73% in London.

2.2 Data collection

The families contacted who agreed to participate in the "Study of Children, Families & Services in the Community" provided extensive information on child and family functioning during the course of a home visit conducted by a specially trained fieldworker, typically lasting around 90 minutes. In the case of home visits to families with 9-month olds, a professional survey-research field force under subcontract from the Office of National Statistics carried out data collection. Home visits to families with 36-month olds, which included standardized cognitive and linguistic testing of children, were carried out by a field staff specially hired and trained for this purpose by the Institute for the Study of Children, Families and Social Issues, Birkbeck, University of London; the institute that houses NESS.

During the course of the home visits, several sets of data were gathered (using well-established, psychometrically-sound measurement instruments) in order to be able to assess the effects of SSLPs on child development and family functioning. In addition, demographic and background information, i.e. "control variables", were collected from each family. The collection of these data, thought to potentially influence the outcome measures and to differ between SSLP and Sure Start-to-be communities, will mean that such influences can be taken into account in the statistical analysis of the data. By proceeding in this manner, the statistical analyses (to be described below—see "Results") discounts any pre-existing differences between families and communities before determining whether children and families differ in ways that could be attributable to the effect of SSLPs. The categories of "control" variables are listed below.

Child Characteristics: gender, age, birthweight, birth complications, perinatal health
Demographic Characteristics: maternal age, lone-parent status, maternal ethnicity, paternal ethnicity, EAL (English as additional language) status
Parent Education: maternal education, paternal education, maternal cognitive difficulties, paternal cognitive difficulties
Socio-Economic Characteristics: family income, maternal work status, paternal work status, maternal occupational classification, paternal occupational status
Parenting, family relationships, family environment and child care: father contact (frequency), father involvement, home-learning environment, regularity of household routine, parental responsiveness (observer rating), parental acceptance (observer rating), parental discipline, parent-child conflict, parent-child closeness, home chaos, domestic violence, partner relations, social support, child care by relative, child care by non-relative, child care in group
Area characteristics: area level ethnicity, employment, education, health, % children 0-3 in workless households, % lone parents, area quality (respondent rating), area quality (rating by home visitor).

It should be noted that because the parenting measurements could reflect the effect of Sure Start Local Programmes (SSLPs) on family functioning rather than pre-existing differences between SSLP and comparison areas in family functioning, statistical analyses were also carried out eliminating the effect of parenting differences across families and communities. Moreover, in some analyses selected parenting measures listed above were themselves treated as outcomes (dependent variables) to determine whether SSLPs exerted a detectable impact on parenting (i.e. father involvement, home learning environment, parent/child conflict, parent-child closeness, home chaos, maternal responsiveness, maternal acceptance, parental discipline). Also area characteristic measurements might also reflect partly SSLP effects as well as pre-existing differences so analyses were also done with this aspect of control eliminated.

When it came to assessing potential effects of SSLPs, information was gathered through a variety of means (i.e. parental report, observation, testing) on a variety of "outcomes" theorised as likely to be affected by SSLPs. These are listed below (with the exception of measures of parenting already listed above), with further details provided in the glossary in Appendix 1:

Child social and emotional development (36 months only): externalising behaviour problems (i.e. disobedience, aggression), internalizing behaviour problems (i.e. anxiety, sadness, withdrawal), prosocial behaviour (e.g. cooperation), independence, hyperactivity, and overall behavioural difficulties, including the presence-absence of such difficulties. These were all obtained by means of parental report.

Child Cognitive and Language Development (36-months only): general cognitive ability, verbal ability, nonverbal ability. These measurements were obtained by means of standardized testing of each child using select subscales from the British Abilities' Scales, specifically Block building (non-verbal), Picture Similarities (non-verbal), Verbal comprehension (verbal) and Picture naming (verbal).

Child Physical Health: frequency of accidents in the last 9 (for 9-month olds) or 12 months (or 36-month olds), presence-absence of accidents in the last 9 or 12 months, frequency of hospital admissions in the past 9 or 12 months, presence-absence of hospital admissions in the past 9 or 12 months. Scores for these outcomes were based on detailed reports by parents of the child's health history

Maternal Psychological Well-being: malaise inventory, self-esteem

3.   RESULTS

3.1 First-Stage Analysis Strategy: Overall Effects of SSLPs

In order to determine whether effects of SSLPs on child development and family functioning were detectable, the data collected were subject to multilevel modelling, a multivariate statistical procedure that takes into account the hierarchical nature of the data, with children and families nested within communities, some of which are SSLP communities and some of which are Sure-Start-to-be (i.e., comparison) communities. The analysis of each dependent variable or outcome measure proceeds in a series of steps. First, a "null" model is tested that includes only the child's age and gender as determinants of the outcome in question. In the next step the demographic variables are added, thereby affording an assessment of the effects of this set of variables—individually and collectively—on the outcome under consideration. In the third and fourth steps in the model, the parent education and socio-economic variables, respectively, are added. At this stage parenting and area characteristics are not included. Hence, as these predictors might themselves be influenced by SSLP activities, all outcomes are tested without possible SSLP effects being suppressed by controlling for a potential mechanism through which Sure Start could affect child development and family functioning (i.e. parenting, or community characteristics). In subsequent steps, parenting and area characteristics are added to the model to complete the assessment of all possible predictors of outcomes. At each step, a designation indicating whether a community was a SSLP or comparison area was included. It was this comparison that indicates whether, across the board, differences proved detectable between SSLP and comparison communities on the outcome in question, differences that would then be attributable to the effects of SSLPs.

Columns 2-5 of Table 1 below present the raw, unadjusted mean scores for each of the outcomes listed above in the Sure Start and comparison communities, and standard deviations (SD). These are the average scores for each outcome *before* taking into consideration (i.e. adjusting for) pre-existing differences between families and communities. The sixth column of the table indicates whether these *unadjusted* mean scores were significantly different from one another. The statistically significant p values are in bold. The seventh column presents the most critical information, namely, the difference between the two groups of scores *after* statistically adjusting for the many control variables and thus any pre-existing differences between SSLP and comparison families and communities. As such, this score is *not* derivable from the simple difference between the raw means presented in the columns labelled "Mean". The significance of the difference between the adjusted score is indicated in the final column of the table.

Inspection of the data presented in Table 1 reveals that prior to implementing statistical adjustments for pre-existing differences between SSLP and comparison areas, significant differences between these two sets of communities could be detected on a number of dependent variables (highlighted in bold type in the 2nd-4th columns). For example, children in SSLP communities scored significantly, even if marginally, higher on cognitive ability and had fewer accidents over the preceding 9-12 months than did children in Sure-Start-to-be communities. At the same time, and again prior to implementing the statistical controls necessary to test for effects of SSLPs, the comparison communities scored significantly higher on amount of father involvement reported by mother/principle caregiver.

Once the necessary statistical controls for pre-existing differences were included in the analysis, very few significant differences between the two sets of communities proved detectable. In the case of one (out of 24) dependent variable, however, a significant effect of SSLPs emerged. (See italicized variable listed in first column of Table 1). Specifically, *in SSLP areas, mothers/principal carers were observed to treat the child in a warmer and more accepting manner than in comparison areas.* This effect is consistent with the broad goals of SSLPs. In addition there were two other dependent variables where there was an effect approaching statistical significance. *In SSLPs, mothers reported higher levels of*

malaise and lower levels of household disorganization/chaos than those in comparison communities.
As these latter two effects did not reach conventional levels of statistical significance they will not be discussed further as fuller data will be available at the end of the cross-sectional study.

Table 1: Comparison of SSLPs and SSLP-to-be communities

	SSLP round 1&2		SSLP-to-be (comparison areas)		p raw mean difference	Adjusted mean difference (final model)	p adjusted mean difference
	Mean	Standard deviation	Mean	Standard deviation			
CHILD DEVELOPMENT							
Externalising score	8.55	2.16	8.55	2.07	ns	0.01	ns
Hyperactivity score	9.48	2.32	9.50	2.32	ns	0.03	ns
Independence score	11.96	1.79	11.84	1.86	ns	0.13	ns
Pro-social score	12.68	1.78	12.65	1.82	ns	-0.05	ns
Internalising score	6.72	1.53	6.82	1.68	ns	-0.04	ns
Child difficulties score	3.60	6.03	3.63	6.06	ns	0.11	ns
Cognitive ability	**41.80**	**7.40**	**41.07**	**7.51**	**0.02**	0.23	ns
Verbal ability	42.51	9.45	42.15	9.72	ns	-0.25	ns
Non-verbal ability	**41.20**	**6.79**	**40.35**	**6.57**	**<0.01**	0.51	ns
Total accidents in 9/12 mth	**0.15**	**0.43**	**0.19**	**0.50**	**<0.01**	-0.02	ns
Hospital admit in 9/12 mth	0.19	0.56	0.15	0.51	**<0.01**	0.02	ns
PARENT AND FAMILY							
Malaise score	1.85	1.97	1.91	1.94	ns	0.10	ns
Father's involvement	**14.20**	**5.03**	**15.25**	**4.84**	**<0.01**	-0.07	ns
Home Learning environment	**18.44**	**6.17**	**17.86**	**6.45**	**0.03**	0.47	ns
Parent/child conflict	15.28	5.36	15.29	5.50	ns	0.25	ns
Parent/child closeness	41.41	3.74	41.29	3.89	ns	-0.01	ns
Self-esteem score	26.68	4.31	26.60	4.31	ns	-0.09	ns
Home chaos score	**15.23**	**2.48**	**15.07**	**2.40**	**<0.01**	0.13	ns
Responsivity	5.03	1.41	5.03	1.50	ns	-0.04	ns
Acceptance	**2.81**	**0.49**	**2.69**	**0.64**	**<0.01**	**0.13**	**<0.01**
Discipline score	**15.22**	**10.22**	**14.22**	**9.75**	**0.02**	-0.26	ns
support scores – help found	1.68	0.82	1.66	0.81	ns	0.01	ns
support scores inc. no help	1.70	0.87	1.69	0.87	ns	0.01	ns
scores for service use	1.57	0.62	1.58	0.62	ns	-0.02	ns

ns = non-significant

3.2 Second Stage Analysis Strategy: Identifying Potentially Effective SSLPs

The testing for SSLP effects so far described answers the question " Is there a significant overall effect of being in an SSLP?". However it remains possible, and even likely that, because of the diversity of SSLPs, particular SSLPs may be having demonstrable effects upon children or families without there being a significant overall SSLP effect. This could occur because the significant effects of some SSLPs are overwhelmed by the lack of similar effects in the remaining SSLPs. Hence a relevant question is "Do particular SSLPs have a significant effect?" The use of multilevel modelling affords a means of answering this question. The modelling enables the extraction of a community level residual effect for each community in the analysis (separately for each dependent variable). Plotting these community residuals enables the identification of which communities are functioning above or below expectations, given the characteristics of its population (included as control variables), with respect to a particular

outcome. Examination of the pattern *across outcomes* of positive and negative outliers for communities provides a means of assessing whether SSLPs are more often outliers than Sure Start-to-be communities.

In order to identify which areas—*in general*--were doing better than expected in terms of child and family outcomes, the community residual effects for 20 dependent variables pertaining to child development and parent/family functioning were selected for special attention. Then each of the 125 communities (i.e. 75 SSLP, 50 comparison/Sure-Start-to-be) was ranked in terms of the degree to which it scored higher than expected on each of the 20 select dependent variables. Whenever a community received a ranking in the top 25% on a dependent variable (i.e. doing substantially better than expected), it received a score of 1; otherwise it received a score of 0. Thus, a community could, in principle, end up with a total score summed across the 20 variables of between 0 and 20, representing the extent to which it deviated—in a positive way—from other communities (i.e. children/families functioning better than expected). As it turned out, 23 communities achieved scores of 8 or more, reflecting the total number of times—out of a possible 20—that they scored in the top 25% of all communities studied in terms of doing better than expected. Of these 23 communities, 18 were SSLP areas and 5 were Sure Start-to-be comparison communities. Thus, whereas 24% of SSLP areas showed evidence of positive impact (as defined above), this was true of only 10% of comparison communities, a difference that is statistically significant (p=0.05). *In other words, SSLP areas were more than twice as likely to be among the especially well-functioning areas than were the comparison areas.* In conclusion, SSLPs seem to have better outcomes than might be expected on the basis of the characteristics of their populations, where positive effects are combined across many specific outcomes.

3.3 Third Stage Analysis Strategy: Linking Variation in Implementation with Variation in SSLP Efficacy

Whereas the first stage of analysis addressed the question of whether there was a significant overall effect of being in an SSLP (on each dependent outcome separately), the second stage of analysis addressed the issue of whether, when considered across a set of outcomes, some communities manifest greater (apparent) effects than others." As it turned out that communities with up and running SSLPs were more likely than Sure-Start-to-be communities to be "positive outliers", a third stage of analysis was carried out trying to determine whether identification could be made of features of SSLP programmes that might account for why some appeared to generate more positive effects than did others. Thus, this third stage of analysis was designed as an exploratory exercise to determine whether variation in the implementation of SSLPs was systematically related to variation in the effect of SSLPs on child/family outcomes. To address this issue it was necessary to do several things. First, residual community effects which had been summed together across 20 variables to conduct the second stage of analysis were subdivided between those that measured child outcomes (e.g., cognitive ability) and those that measured parent (e..g., malaise) or parenting parenting (e.g., acceptance). It was these two new composite (residualized) outcomes that became the things to be explained by features of implementation. The features of implementation selected for examination and composited on the basis of conceptual relatedness to yield a series of implementation measures are listed in Table 2 below.

Table 2: Implementation Composites (Conceptually derived)

Composite	Variables in composite
No. of systems/strategies to identify families in area (range: 0-6)	Centralised data base, Local agencies, Midwives, Health Visitors, Hospitals, Ad-hoc systems/strategies *(score per source: 0=no, 1=yes)*
No. of systems/strategies to identify new babies born in area (range: 0-6)	Centralised data base, Local agencies, Midwives, Health Visitors, Hospitals, Ad-hoc systems/strategies (score per source: 0=no, 1=yes)

No. of systems/strategies to identify new families with children aged 0-3 moving into area (range: 0-6)	Centralised data base, Local agencies, Midwives, Health Visitors, Hospitals, Ad-hoc systems/strategies *(score per source: 0=no, 1=yes)*
Health Check Composite (range: 0-2)	System/strategy for monitoring whether children under 4 are receiving routine health checks *(0=no, 1=yes)* System/strategy for making contact with all children under 4 who are not receiving routine health checks *(0=no, 1=yes)*
No. of Parenting Programmes (range: 0-3)	Preparation for parenthood (0=no, 1=yes) Self-esteem parenting programmes *(0=no, 1=yes)* Other parenting classes (e.g.: Webster-Stratton) *(0=no, 1=yes)*
No. of Special Parenting Services (range: 0-8)	Newly arrived parents/children (i.e. refugees/ asylum seekers) or non-English speakers Parents with children at risk of neglect/ abuse New mothers (ante-natal or post natal programmes) Parents without specific needs (i.e. general parenting programme) Parents with children with behavioural problems Parents having children with special needs Parents with children having special educational needs (SEN) Young / teenage mothers (ante-natal or post natal programmes) *(score per variable: 0=no, 1=yes)*
No. of Special Needs Provision (range: 0-20)	Portage Respite sessions Clinical psychologist/ Educational psychologist Creche / daycare/ childminding provision Special support worker for 1:1 or group session Mobile play unit Key worker system Equipment loan schemes Inclusive childcare/ play/ exercise opportunities Extra trained staff (i.e. nursery nurse, S&L therapists, special needs worker) Toy library Extra home visits/support Extension of speech & language therapy/support Family support/advocacy Therapeutic activities for parents (e.g. art classes, craft) Special parents/support groups Links with voluntary organisations Transport Multi sensory room/ equipment Special language programmes (e.g. Makaton) *(score per variable: 0=no, 1=yes)*
No. of School Links (range: 0-6)	

No. of NurseryLlinks **(range: 0-6)**	Shared training School staff on partnership board, steering group or other management group Delivery joint school/Sure Start projects Special Sure Start worker links directly with school link staff School staff are also Sure Start staff member (s) *(score per variable: 0=no, 1=yes)*
N **o. of Parental Educational Links** **(range: 0-8)**	Joint home visits Shared training Nursery staff sit on partnership board, steering group or other management group Delivery joint school/Sure Start projects Special Sure Start worker links directly with nursery link staff Nursery staff are also Sure Start staff member(s) *(score per variable: 0=no, 1=yes)*
Regional Office Risk Rating at 18 months **(range: 0-2)**	Colleges of further education Other area based initiatives/ programmes (eg. SRB, Connexions, etc.) Learning and Skills Councils Local education department Community education department Local consortia of training agencies (including local educational agencies/ institutions) Local libraries JobCentre Plus *(score per variable 0=no, 1=yes)*
2ndYear Cost/Child	*42 SSLPs rated low, 27 rated medium, 4 rated high*

But before these just listed (composite) implementation variables derived from the national surveys of SSLPs by the Implementation module could be directly associated with the composite (community-specific residualized) measures of child and parent/parenting in hopes of identifying influential implementation factors/processes, it was necessary to take into account additional characteristics of the communities in which SSLPs were embedded that had been measured by the Local Context Analysis module. By proceeding in this manner, it would be possible to address the issue of what features of the implementation of SSLPs might account for variation in (apparent) programme efficacy after taking into account of characteristics of the community not included in the original multi-level modelling. Listed in Table 3 below are the community variables derived from the Local Context Analysis module that were controlled statistically, after first compositing them on the basis of data-reduction-oriented factor analysis, before exploring potential effects of the above-listed implementation variables:

Table 3: Local Context Analysis Composites (Derived from Factor Analyses)

Composite	Variables in Composite
Ethnic population (Indian subcontinent) and young children	High % of population from Indian subcontinent High % of population children under 4 years old Low % of population aged 60+
Black population and number of working age adults	High % of population Black High % of population working age adults

Lone and teen mothers	High % of live births to teen mothers High % of live births to lone mothers
Deprivation	High % of 0-3 year olds living in workless households High % of 0-3 year olds living in households receiving Income Support High % of 4-17 year olds living in households receiving Income Support High % of adults with no qualifications High % of primary age children eligible for free school meals
Unemployment	High % of population unemployed and last worked before 1996 High % of adults receiving Job Seekers Allowance High % of children under 4 living in households receiving Job Seekers Allowance
Child Illness/Disability	High no. of cases of gastroenteritis per 1,000 children aged 0-3 years High no. of cases of lower respiratory infection per 1,000 children aged 0-3 years High no. of cases of severe injury per 1,000 children aged 0-3 years High % of 0-3 year olds receiving Disability Living Allowance High % of 4-17 year olds receiving Disability Living Allowance
Infant Mortality	High no. of cases of infant mortality per 1,000 live births High no. of cases of neonatal mortality per 1,000 live births High no. of cases of perinatal mortality per 1,000 live births
School Achievement: Key Stage 1	High % of children aged 7 achieving Level 2 Key Stage 1 English High % of children aged 7 achieving Level 2 Key Stage 1 Maths
Household Crowding	High % of children aged 7 achieving Level 2 Key Stage 1 Science
Council housing	Low % households with up to 0.5 persons per room High % households with more than 1.5 per room
Adult Poor Health/Disability	Low % of households owner occupied High % of households council owned High % of female population with long term illness per 100 population (age standardised) High % of female population with long term illness per 100 population (age standardised) High % of adults receiving Disability Living Allowance or Attendance Allowance High % of adults receiving Severe Disability Allowance or Incapacity Benefit

As a prelude to examining the effect of implementation factors on residualized parent and child outcome composite scores (these scores reflect the effects related to particular communities after allowing for child, parent & family background factors), the above listed LCA composites were themselves associated with these same parent and child outcomes to see how community characteristics related to variation in SSLP programme efficacy. As can be seen in Table 4, community characteristics accounted for 24% and 12%, respectively, of the composite parent and child programme/community-specific outcomes. More specifically, *programmes appeared more effective in the case of parent outcomes when communities were comprised of a greater population of Blacks (and working age adults), of fewer lone parents, of fewer children in poor health, of greater household crowding and of fewer adults in poor health (and on disability).* In addition, *programmes appeared more effective in the case of child outcomes when communities were comprised of a greater population of Blacks (and working age adults), of fewer lone parents, and of fewer adults in poor health (and on disability).* While not conclusive, these data begin to suggest that programmes may prove more effective in deprived communities that are somewhat less deprived than others (i.e., fewer lone parents, somewhat better adult and child health).

Table 4: Correlations Between LCA Factor Scores and Residual Community Effects

LCA Factors	Parent	Child
Ethnic population (Indian subcontinent) and young children	.00	-.17
Black population and number of working age adults	.45**	.25*
Lone and Teen mothers	-.29*	-.26*
Deprivation	-.08	-.14
Unemployment	.02	-.08
Child Illness/Disability	-.30**	-.16
Infant Mortality	-.10	-.14
School Achievement: Key Stage I	.12	.13
Household Crowding	.29*	- .01
Council Housing	.16	-.10
Adult Poor Health/Disability	-.30**	-.30**
$\Delta R^{2\bullet}$	.24	.12

*$p < .05$, **$p < .01$
•Based on using the LCA factors that produced significant correlations in the table above

The final step in the analyses, as outlined above, was to determine whether variation in programme implementation might account for variation in programme efficacy, after discounting not only the background variables included in the original multi-level models, but those LCA variables shown to predict the composite parent and child community-specific outcomes which were just discussed (i.e., see Table 4). The results of this analysis are displayed in Table 5 and show only 2 of 26 significant associations indicate—in the main and in contrast to LCA factors describing communities—that *measured features of programme implementation do not, for the most part, account for variation in programme efficacy detected to date*. The same was true when the lead agency of the SSLP was considered (see Table 6). Hence further investigation of the possible differentiating characteristics of seemingly effective programmes is needed. This is a priority of the next stages of the impact evaluation.

Table 5: Correlations Between Residualized Community Scores and Implementation Variables After the (Significant) Effects of Local Context Variables Have Been Removed[a]

	Parent [b]	Child[c]
Implementation Variable		
Systems to Identify Families	-0.06	0.18
Systems to Identify New Babies	-0.09	0.26*
Systems to Identify New Families With 0-3 Year Olds	0.04	0.17
Health Check Composite	-0.09	0.04
Number of Parenting Programs	0.04	-0.02
Number of Special Parenting Services	-0.07	-0.05
Number of Special Needs Provision	-0.03	-0.16
Number of School Links	-0.01	-0.04
Number of Nursery Links	-0.19	-0.16
Number of Parental Education Links	-0.27*	-0.11
Regional Office Risk Rating	-0.15	-0.02
2nd year Cost/Child	0.18	0.05
Implementation Missing	0.16	0.08
ΔR^2•	0.07	0.07

• Based on entering implementation variable with significant correlation from the table above.
* $p < .05$
[a] The computer initially determined which LCA variables were significant using a stepwise approach. Then significant LCA variables were entered into a hierarchical regression using the significant LCA variable(s) in the first step and an implementation variable in the second step.
[b] Significant predictor in stepwise run was factor "Black and number of working age adults".
[c] Significant predictor in stepwise run was "adult health".

Table 6: Comparison of Programmes as a Function of Lead Agency: Local Authority vs. Health vs. Other (e.g., education, voluntary sector)

	Parent		Child	
LEAD AGENCY	Mean	Standard Deviation	Mean	Standard Deviation
Local Authority (n=35)	-0.05	0.23	0.01	0.18
Health (n=12)	0.10	0.20	-0.04	0.20
Other N=17)	-0.04	0.23	-0.02	0.15
F tests[a]				
Controlling for context effects	2.01		0.56	
Not controlling for context effects	1.92		0.41	

[a] The local context effects that were controlled were selected using stepwise regression.

4. PRELIMINARY CONCLUSIONS

It is important to realise that this is a report of preliminary findings because the entire cross-sectional Impact study will not be completed until the end of 2004, and that the cross-sectional data collected on 9-month olds represents the beginning of a longitudinal investigation of the impact of SSLPs on children and families.

With these critical qualifications in mind, some evidence did emerge suggestive of a positive, limited effect of SSLPs. When individual outcomes were considered there was a significant effect for only one parenting measure. To some extent this might be expected, given a "theory of change" that the initial impacts of SSLPs will be detectable in the case of families rather than on children's development and that much of the theorised effects of SSLPs on children will "flow through" parenting and family dynamics. After taking into account multiple pre-existing differences between SSLP and comparison communities, maternal warmth/acceptance was observed more often in SSLPs.

Other evidence of potentially beneficial effects associated with SSLPs derives from the attempts to identify especially effective areas. SSLP areas proved to be more likely to be successful on measures derived from combining results across many individual parenting and child outcomes in that SSLP communities were identified as more effective across a composite of measures of child and family functioning than would be expected by chance.

While evidence emerged suggesting that programmes in perhaps less disadvantaged deprived communities may be more effective than others, there was little success in identifying features of programmes themselves that might account for variation in (apparent) programmed efficacy. Clearly, these latter results provide little grounds for informing policy or practice about ways of improving programme efficacy.

APPENDIX 1

GLOSSARY OF OUTCOME VARIABLES

CHILD DEVELOPMENT
Externalising*: antisocial or disruptive behaviour; fights/bullies, temper tantrums, argues
Hyperactivity*: *restless, distractable, impulsive, overexcited*
Independence*: *works things out for self, chooses activities for self, persists with difficult tasks*
Pro-social*: *shows concern for others, shares, liked by others*
Internalising*: worried/anxious behaviour, worries, clingy, tearful, fearful
Child difficulties*: overall difficulty getting along with others, concentrating, behaving
Cognitive ability*: overall performance on British Abilities Scale (BAS)
Verbal ability*: *language expression and comprehension abilities (subscale of BAS)*
Non-verbal ability*: *spatial and number skills (subscale of BAS)*
Total accidents in 9/12 mth: *frequency of accidents in past year (or 9 months for 9 month olds)*
Hospital admit in 9/12 mth: *frequency of hospital admissions in past year (or 9 months for 9 month olds)*
PARENT AND FAMILY
Malaise: depression measure:jittery, tired, depressed (bad for parenting and child development)
Father's involvement : looks after, feeds, plays with child (as reported by mother)
Home Learning environment*: learning opportunities provided in home; *child read to, taken to library, engaged in play with letters/numbers*
Parent/child conflict*: *parent-child struggles, child easily angry with parent, conflict with discipline*
Parent/child closeness*: *affectionate relationship, child seeks comfort, child shares feelings*
Self-esteem: positive feelings about self (good for parenting and child development)
Home chaos: disorganized, noisy, lacking regular routine
Responsivity: observations of mother praising, responding, showing affection
Acceptance: not observing scolding/derogating, spanking, physically restraining
Discipline*: *frequency of (reported) swearing, threatening, smacking, slapping child*
support – help found: finding help when needing support
support no help: not finding help when needing support
service use: number of different types of services used