



UNIVERSITY
OF WOLLONGONG
AUSTRALIA

University of Wollongong
Research Online

Faculty of Social Sciences - Papers

Faculty of Social Sciences

2010

The impact of Sure Start local programmes on 5-year-olds and their families

Edward Melhuish

University of Wollongong, melhuish@uow.edu.au

Jay Belsky

University of London

Alastair H. Leyland

MRC Social and Public Health Sciences Unit

Angela Anning

University of London

David Hall

University of Sheffield

See next page for additional authors

Publication Details

Melhuish, E., Belsky, J., Leyland, A., Anning, A., Hall, D., Tunstill, J., Ball, M., Meadows, P., Barnes, J., Frost, M., Hibbett, M. & Cullis, A. (2010). The impact of Sure Start local programmes on 5-year-olds and their families. London, United Kingdom: Department for Education.

Research Online is the open access institutional repository for the University of Wollongong. For further information contact the UOW Library:
research-pubs@uow.edu.au

The impact of Sure Start local programmes on 5-year-olds and their families

Abstract

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 these communities 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). This has profound consequences not just for the children but for their families, communities, and for society at large.

Keywords

local, impact, families, their, olds, start, year, sure, 5, programmes

Disciplines

Education | Social and Behavioral Sciences

Publication Details

Melhuish, E., Belsky, J., Leyland, A., Anning, A., Hall, D., Tunstill, J., Ball, M., Meadows, P., Barnes, J., Frost, M., Hibbett, M. & Cullis, A. (2010). The impact of Sure Start local programmes on 5-year-olds and their families. London, United Kingdom: Department for Education.

Authors

Edward Melhuish, Jay Belsky, Alastair H. Leyland, Angela Anning, David Hall, Jane Tunstill, Mog Ball, Pamela Meadows, Jacqueline Barnes, Martin Frost, Mark Hibbett, and Andrew Cullis

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

The National Evaluation of Sure Start (NESS) Team

Sure Start Local Programmes (SSLPs), the forerunners to Sure Start Children's Centres, aim to support young children and their families by integrating early education, childcare, healthcare and family support services in disadvantaged areas. The programmes aim to improve the health and well-being of families and young children, so that the children will have a greater opportunity to do well in school and later in life. This study investigates child and family functioning in over 7000 families in 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 and area background characteristics. Comparisons between five year old children and families living in SSLP areas and those living in similar non-SSLP areas revealed mixed SSLP effects, most being beneficial and a couple being negative in character.

The main impacts identified for children were that:

- children growing up in SSLP areas had lower BMIs than children in non-SSLP areas. This was due to their being less likely to be overweight with no difference for obesity.
- children growing up in SSLP areas had better physical health than children in non-SSLP areas.

Mothers in SSLP areas reported:

- providing a more stimulating home learning environment for their children.
- providing a less chaotic home environment for their children.
- experiencing greater life satisfaction.
- engaging in less harsh discipline.
- experiencing more depressive symptoms.
- Being less likely to visit their child's school for parent/teacher meetings or other arranged visits. Although the overall incidence was low generally.

In terms of change over the time between when children were 3 years and 5 years old in comparison with those in non-SSLP areas, mothers in SSLP areas reported:

- more positive change in life satisfaction.
- more improvement in the home learning environment.
- a greater decrease in harsh discipline (i.e. greater improvement).
- a greater decrease in workless household status (from 9 months to 5 years of age).
- less positive change in self regulation. This was due to MCS children catching up with the NESS group that had been ahead at age 3. There was no difference between the two groups in self regulation at age 5.

Background

The overall goal of Sure Start Local Programmes (SSLPs) was to enhance the life chances for young children growing up in disadvantaged neighbourhoods. Children in these communities 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). This has profound consequences not just for the children but for their families, communities, and for society at large. Thus, SSLPs not only aimed to enhance health and well-being during the early years, but to increase the chances that children would enter school ready to learn, be academically successful in school, socially successful in their communities and occupationally successful when adult. Indeed, by improving - early in life- the developmental trajectories of children at risk of compromised development, SSLPs aimed to break the intergenerational transmission of poverty, school failure and social exclusion.

SSLPs were strategically situated in areas of high deprivation and they represented an innovative intervention unlike almost any other undertaken to enhance the life prospects of young children in disadvantaged families and communities. One characteristic which distinguished SSLPs from almost all other early interventions evaluated up to the year 2000, was that the programme 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 limiting any 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 to improve and create services as needed, without specifying how services were to be changed.

From 2005 to 2006, fundamental changes were made in SSLPs, as they came under the control of Local Authorities and were operated as children’s centres (CCs). This modified the service-delivery process in that the guidelines for CCs were more specific about the services to be offered. Nonetheless there is still substantial variation among Local Authorities and areas within Local Authorities in the way the new CC model is implemented. This continues to pose challenges to evaluating their impact, as each SSLP or CC remains unique.

Methodology

As part of an assessment of the impact of SSLPs on child and family functioning, the Impact Study of the National Evaluation of Sure Start (NESS) has followed up over 7000 5-year-olds and their families in 150 SSLP areas who were initially studied when the children were 9 months and 3 years old. The 5 year old study followed up a randomly selected subsample (79%) of the children and families previously studied at 9 months and 3 years.

The group of Millennium Cohort Study (MCS) children and their families, against which the NESS sample was compared, was selected from the entire MCS cohort. Their selection was based upon identifying and selecting children living in areas with similar economic and demographic characteristics to those in which the NESS sample resided, but which were not SSLP-designated areas and thus did not offer SSLP services. This enabled the NESS research team to make comparisons with children and families from areas as similar as possible to the NESS Impact Study areas to detect the potential effects of SSLPs on children and families.

Methodological Issues

Any effects discerned have to be considered “putative” because the data for the NESS and MCS samples of 5-year olds and their families were collected two years apart and by two different research teams. This makes attributing any effects to SSLP exposure per se difficult, as they could potentially reflect changes taking place in communities or society more generally across the two-year period or be the result of measurement

differences by the two research teams, although close cooperation did occur with respect to staff training. Indeed, possible time of measurement effects were identified when children were 3 years old with respect to child immunisations. That is, apparently positive effects of SSLPs on immunisations were found to be possibly a function of the time difference between when NESS and MCS 3-year old data were collected rather than an effect of SSLPs on immunisations.

Note that measures of child development deriving from Foundation Stage Profile (FSP) data are free from problems linked to time of measurement or the differences between research teams in that FSP measurement is done by teachers independent of any research team, according to national measurement guidelines.

Missing data is unavoidable in a longitudinal study of this size. In order to counter possible bias due to missing data, comparisons between the 5-year olds and their families participating in the NESS and the MCS comparison group were conducted for three different but overlapping samples:

1. Those children/families interviewed at age 5 for both NESS and the MCS for whom *complete data* were available (i.e. no missing data whatsoever on measurements used in this report). (N=5,101 for NESS sample and 1,061 for MCS sample).
2. Those seen at age 5 and for whom complete data were not available at age 5 (N=7,258 for NESS, 1,655 for MCS).
3. Those seen at 3 years old regardless of whether they were also seen at 5 years old (N=9,192 for NESS, 1,879 for MCS).

Imputation allows investigators to estimate scores for those lacking actual measurements on a given variable by using all the other information available on all individuals. In essence, it uses what is known about 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 before any analyses were conducted that only SSLP effects (i.e., NESS-MCS differences) that proved significant across *all three sets* of analyses would be regarded as reliable and thus meaningful for presentation and interpretation in this report.

Child/Family and Community Control Variables

A variety of child/family and community variables functioned (principally) as control variables in the analyses to be described (see Appendix B). These included the following:

- *Child Characteristics*: age (in months), age in school year, gender and ethnicity.
- *Demographic, Socioeconomic and Parental Characteristics*: English as only household language (yes, no), maternal age at child's birth (<20 vs. ≥ 20), lone parent (yes/no), maternal self-reported cognitive difficulties (some vs. none), household income (below vs. above poverty line), highest individual occupational status in household, highest educational level of household, household work status (workless household vs. adult employed).
- *Area characteristics*: Area data, derived from the Index of Multiple Deprivation (IMD, ODPM, 2004) and the 2001 census were subject to a principal components analysis that yielded seven area-level factors. For purposes of the current evaluation of SSLP effects, the resulting area-level factor scores function as covariates. The seven area factors were identified as, economic deprivation, large non-Asian ethnic minority present, many children, large Asian/Pakistani population, large transient population with children, large Asian/Bangladeshi population, and large Asian/Indian and student population. In addition the IMD 2004 and an index of urban/rurality were included as area level variables.

Child/Family Dependent/Outcome Variables

The outcome variables for children and families were:

Child Educational Development:

Foundation Stage Profile (FSP):

1. Personal, Social and Emotional Development (PSE):
2. Communication, Language and Literacy (CLL):
3. Problem-solving, Reasoning and Numeracy (MAT):
4. Knowledge and Understanding of the World (KUW)
5. Physical Development (PD)
6. Creative Development (CD)
7. Total FSP score

Child social and emotional development: emotional dysregulation, positive social behaviour, internalising behaviour, self-regulation. These were all obtained by means of parental report.

Child Physical Health: general physical health based on detailed reports by parents of the child's health history; and body mass index (BMI), based upon height and weight measurements by a researcher.

Parenting and Family Functioning: harsh discipline, home chaos, home learning environment (HLE), and parent's involvement with school (all parent report).

Maternal well-being: life satisfaction; depression

Local Area: perceived area safety, rated by mother.

Parental Employment change: The likelihood of change in working/workless household status from when the child was 9 months of age to when the child is five years of age is examined. – Note this is included in our section on change in outcomes and has a different form of analysis to other outcomes in that change since the child was 9 months old is estimated.

Findings

After taking into consideration pre-existing family and area background characteristics, the analyses comparing children and families living in SSLP areas and those living in similar non-SSLP areas revealed mixed SSLP effects, most being positive/beneficial in nature and a couple being negative in character.

The main impacts identified for children were that:

- *Children growing up in SSLP areas had lower BMIs than children in non-SSLP areas. This was due to their being less likely to be overweight with no difference for obesity (using WHO, 2008, criteria).*
- *Children growing up in SSLP areas experienced better physical health than children in non-SSLP areas.*

The positive effects associated with SSLPs for maternal well being and family functioning, in comparison with those in non-SSLP areas were that mothers residing in SSLP areas reported:

- *providing a more cognitively stimulating home learning environment for their children.*
- *providing a less chaotic home environment for their children.*
- *experiencing greater life satisfaction.*
- *engaging in less harsh discipline.*

On the negative side, however, in comparison with those in non-SSLP areas;

- *Mothers in SSLP areas reported more depressive symptoms.*
- *Parents in SSLP areas were less likely to visit their child's school for parent/teacher meetings or other arranged visits. Although the overall incidence of such visits was low generally.*

Finally, no differences emerged between the NESS and MCS groups on 7 measures of cognitive and social development from the Foundation Stage Profile completed by teachers, 4 measures of socio-emotional development based on mothers' ratings, and mothers' ratings of area safety. In summary, across 21 outcomes, significant effects of SSLPs emerged for 8 outcomes.

Change in Family and Child Functioning Over Time:

In looking at change over time in family and child functioning between the ages of 3 years old (or 9 months for worklessness) until age 5, 5 of 11 repeatedly measured dependent variables showed evidence, again, of mostly positive and only one negative SSLP effect.

In comparison with those in non-SSLP areas, mothers in SSLP areas:

- *Showed more positive change (i.e., greater increase) in life satisfaction.*
- *Reported more positive change in the home learning environment (i.e., greater improvement).*
- *Reported more positive change in harsh discipline (i.e., greater decrease).*

In addition, in comparison with those in non-SSLP areas:

- *There was a greater decrease in workless household status (from 9 months to 5 years of age) for families in SSLP areas.*

Children in SSLP areas, however:

- *manifested less positive change in self regulation, that is, their capacity to control or manage their actions. This, however, appeared to be due to the fact that the children in the SSLP areas manifested greater self regulation at age 3, but by the time of the age-5 follow up, the MCS comparison group of children had caught up with them. This resulted in there being no difference in self regulation between the two groups by the time children were 5.*

There were no differences associated with SSLPs on change from age 3 to 5 years in child emotional dysregulation, positive social behaviour or internalising behaviour as rated by parents; no differences in child accidents, mother's depression, or chaotic home environments.

Were there subgroup differences in impact?

A key question is whether SSLPs affected some children and/or families more than others. As it turned out, analysis of the data collected at age 5, including change in child and family functioning over time, revealed:

- *There was virtually no evidence that the overall effects (and non-effects) of SSLPs summarised in the preceding two subsections, varied across policy-relevant demographic sub-groups (e.g., lone parents, workless households). Differences in SSLP effects across subgroups emerged less frequently than would be expected by chance.*
- *Effects of SSLPs were the same in the most deprived SSLP areas relative to those somewhat less deprived (but still deprived) areas.*

The Impact of the 3 and 4 Year Old Free Entitlement to Early Years 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 (Belsky et al., 2007; Melhuish et al., 2008b; Sylva et al., 2010). While pre-school education was (and remains) part of what SSLPs (now children's centres) offered, it would also have been available to children in non-SSLP areas. From 2004, the Government introduced regulations that gave an entitlement to 12.5 hours of free childcare a week to all 3 and 4 year olds and 95% of eligible children take up this offer (Statistical First Release, DCSF June 2010). Hence there are unlikely to be differences in the pre-school education experienced by the NESS and MCS samples. This equivalence of pre-school education experience across those living in SSLP and non-SSLP areas *could* be responsible for the failure to detect SSLP effects on children at age 5 (apart from physical health measures) in this third phase of impact evaluation. That is, it *could* be that developmental advantages associated with SSLPs at age three were not detected at age 5 because by this time almost all children had access to pre-school education, which resulted in "catch up" for those children in non-SSLP areas.

Another NESS report to be published with this report explores the quality of pre-school provision in SSLP areas and any links with child outcomes (Melhuish et al, 2010).

Conclusion

The NESS research team has faced a number of methodological challenges in developing the NESS Impact Study and these are outlined in this summary and presented in more detail in the main report. These issues have meant that the study has been limited in its 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 inevitably resulted in a two year gap between SSLP and comparison data collection, which meant that any SSLP-comparison group differences might be due to time effects. This limitation did not apply to FSP scores. However, whilst bearing in mind the methodological caveats, it is possible to draw the following conclusions from this third phase of the Impact Study.

The results show that there were six positive SSLP effects and two negative SSLP effects, but many non-effects, especially with regard to children's development. While positive effects exceeded negative ones, the number of outcomes where there were no differences between the two samples exceeds both put together. The positive effects discerned apply primarily to the parents in terms of greater life satisfaction, engaging in less harsh discipline, providing a less chaotic home environment and a more cognitively stimulating home learning environment. Only in the case of physical health did children apparently benefit directly. The negative effects were that mothers experienced more depressive symptoms and parents in SSLP areas were less likely to attend school meetings. No SSLP effects emerged in the case of "school readiness", defined in terms of children's early language, numeracy and social skills needed to succeed in schools, as measured by the Foundation Stage Profile. This may be due to high levels of participation in the 3 and 4 Year Old Free Entitlement to pre-school education across England, which has resulted in many of the MCS children also benefitting from early years learning opportunities.

In terms of changes in child and parent functioning over time, in SSLP areas compared to non-SSLP areas mothers in SSLP areas showed greater improvements in life satisfaction, and in the home learning environment and greater decreases in harsh discipline. Children in SSLP areas, however, showed less positive change in self regulation, that is, their capacity to control or manage their actions. This appeared to be due to the fact that the children in the SSLP areas manifested greater self regulation at age 3, but by the time of the age-5 follow up, the MCS comparison group of children had caught up with them. Finally, in comparison with those in non-SSLP areas, there was a greater decrease in workless household status (from 9 months to 5 years of age) for families in SSLP areas.

The impacts of SSLPs that have been identified did not vary by sub-group, suggesting that all sections of the population within relevant communities are being reached by services.

The results discerned in this third phase of the NESS Impact Study provide some support for the view that government efforts to support children/families via the original area-based approach to Sure Start paid off, at least to some degree, even if some negative effects have arisen as well. Since its early days Sure Start has evolved considerably responding to research findings and internal and external feedback. In particular, policy developments have clarified guidelines and worked to strengthen service delivery. However, at the same time, one cannot entirely discount the possibility that these apparently positive and negative effects are an artefact of the two-year gap between NESS and MCS data collections. Nevertheless, while the results are modest, when compared with results from the earlier cross-sectional study, they raise the possibility that the value of Sure Start children's centres is improving, but greater emphasis needs to be given to focusing services on improving child outcomes, particularly language development, if school readiness is to be enhanced for the children served.

REFERENCES

- Belsky, J., Vandell, D. Burchinal, M. Clarke-Stewart, K.A., McCartney, K., Owen, M. & The NICHD Early Child Care Research Network (2007). Are There Long-term Effects of Early Child Care? *Child Development*, 78, 681-701.
- DfE (2010). Statistical First Release: Provision for Children Under Five Years of Age in England - June 2010. Available at: <http://www.dcsf.gov.uk/rsgateway/DB/SFR/s000935/SFR16-2010.pdf>
- Melhuish, E.C., Sylva, K., Sammons, P., Siraj-Blatchford, I., Taggart, B., Phan, M. & Malin, A. (2008b). Preschool influences on mathematics achievement. *Science*, 321, 1161-1162.
- Melhuish et al (2010) The Quality of Group Childcare Settings Used by 3-4 Year Old Children in Sure Start Local Programme Areas and the Relationship with Child Outcomes
- ODPM. (2004), *The English Indices of Deprivation 2004 (revised)*. London: ODPM.
- Sylva, K., Melhuish, E., Sammons, P., Siraj-Blatchford, I. and Taggart, B., (Eds) (2010). *Early Childhood Matters: Evidence from the Effective Pre-school and Primary Education Project*. London: Routledge.
- WHO 2008. *Growth Reference charts*. Available at: http://www.who.int/growthref/who2007_bmi_for_age/en/index.html

Additional Information

The full report can be accessed at www.education.gov.uk/research

Further information about this research can be obtained from
Gail Peachey, Sanctuary Buildings, Great Smith Street, London, SW1P 3BT.

Gail.PEACHEY@education.gsi.gov.uk

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).

The views expressed in this report are the authors' and do not necessarily reflect those of the Department for Education.