Postnatal support for mothers living in disadvantaged inner city areas: a randomised controlled trial


Study objective: To evaluate the effect of two forms of postnatal social support for disadvantaged inner city mothers on maternal and child health outcomes.

Design: Randomised controlled trial with economic and process evaluations and follow up at 12 and 18 months. The two intervention groups received either the offer of a year of monthly supportive listening home visits by a support health visitor (SHV), or a year of support from community groups providing drop in sessions, home visiting and/or telephone support (CGS). Each was compared with a control group that received standard health visitor services.

Setting: Two disadvantaged boroughs of London, United Kingdom.

Participants: 731 women from culturally diverse backgrounds with infants.

Main results: At 12 and 18 months, there was little impact for either intervention on the main outcomes: child injury (SHV: relative risk 0.99; 95% confidence intervals 0.68 to 1.45, CGS: 0.91; 0.61 to 1.36), maternal smoking (SHV: 0.86; 0.62 to 1.19, CGS: 0.97; 0.72 to 1.33) or maternal depression (SHV: 0.86; 0.62 to 1.19, CGS: 0.93; 0.69 to 1.27). SHV women had different patterns of health service use (with fewer taking their children to the GP) and had less anxious experiences of motherhood than control women. User satisfaction with the SHV intervention was high. Uptake of the CGS intervention was low: 19%, compared with 94% for the SHV intervention.

Conclusions: There was no evidence of impact on the primary outcomes of either intervention among this culturally diverse population. The SHV intervention was associated with improvement in some of the secondary outcomes.

Families with young children living in disadvantaged areas have been a primary target of UK government initiatives to improve health. Initiatives such as Sure Start aim to harness and improve local services to focus additional support on families in these areas. Since the 1970s there has been a growing interest in the link between social support and health. Home based support for mothers of infants has been shown to have potential in reducing the incidence of childhood injury, and to have positive health outcomes for mothers and children. This support has been provided by both health professionals and lay supporters. However, existing trials have important methodological weaknesses in particular poorly concealed allocation, substantial loss to follow up, and failure to report an intention to treat analysis. Furthermore, because most of the studies have been carried out in North America, it is not clear whether their findings apply to the UK health context.

To address the question of whether increased postnatal support could influence maternal and child health outcomes, we carried out a randomised controlled trial with two alternate support interventions for mothers with infants living in disadvantaged inner city areas: one provided by specially trained health visitors; the other by local community groups. Economic and process evaluations were also conducted.

METHODS

Study participants, recruitment, and randomisation

The study was conducted in the inner London boroughs of Camden and Islington, which are characterised by extremes of both wealth and poverty—overall they are the 17th and 10th most deprived boroughs in the United Kingdom. Women living in deprived enumeration districts were eligible to take part in the social support and family health (SSFH) study if they gave birth in the first nine months of 1999. An information leaflet (with basic information translated in six additional languages) was sent to potential participants, followed by a recruitment visit in the women’s homes between March and November 1999; randomisation was explained, written informed consent obtained, and baseline data collected from women who wished to participate. Interpreters were used in the recruitment visits for the 14% of the eligible women who spoke no English. Women whose babies had died, were seriously ill, or had been placed in foster care were excluded from the trial.

The allocation sequence was computer generated (MINIM software program) and minimisation was used to provide a reasonable balance on three potential confounders (housing tenure, lone parenthood, and parity). Recruiters provided a centrally based administrator with the participant’s name and information on the minimisation factors. These data were entered into the computer program to determine the participant’s allocation. The central administrator then wrote to the participant giving allocation status. As a result, recruiters had no knowledge of the participant's allocation until allocation had taken place.

Study interventions

The support health visitor (SHV) intervention consisted of the offer of a year of monthly supportive listening visits to take place in the woman's home, beginning when the baby was about 10 weeks old. The SHVs' primary focus was on the

Abbreviations: SSFH, social support and family health study; SHV, support health visitor; CGS, community group support; EPDS, Edinburgh postnatal depression scale; GHQ, general health questionnaire; DUFSS, Duke UNC functional social support scale
woman rather than her child; listening to her requests and responding to her needs rather than addressing a predetermined agenda. The SHVs also provided practical support and information on request. The intervention was carried out by five very experienced health visitors who underwent two days of additional training, provided by an external specialist NHS team, in the listening model of support. Interpreters were available to the SHVs when making home visits.

The community group support (CGS) intervention entailed being assigned to one of eight community groups that offered services for mothers with children less than 5 years in the study area. The groups offered a combination of services: drop in sessions, home visiting, and/or telephone support. They made their standard package of services available to study women for one year. Groups in the CGS arm of the trial used whatever interpreting services were a normal part of their support; they were not provided with additional interpreting resources as part of their trial participation.

Routine NHS health visiting services were available to women in the control group and both intervention arms. In the study area these entail one postnatal home visit when the baby was 10–15 days old and clinic support thereafter; subsequent home visits are not routinely made, except for women deemed to be at risk.

![Figure 1](http://jech.bmj.com/)

**Figure 1** CONSORT flow chart of participants in the SSFH study.
Outcome assessment and analysis
The outcomes to be measured were selected after examination of the results of a systematic review of existing trials of home-based social support interventions. Childhood injury, maternal depression, and smoking were selected as primary outcomes because of their concentration as factors adversely affecting children in socially disadvantaged groups. The secondary outcomes were: uptake and cost of health services; household resources; maternal and child health; experiences of motherhood and infant feeding. The economic evaluation assessed costs to the public sector, mothers, and voluntary groups. Maternal depression was measured at three time points: the Edinburgh postnatal depression scale (EPDS) was used at 8 weeks and 14 months postpartum and the general health questionnaire (GHQ12) was used at 20 months postpartum. The Duke UNC functional social support scale (DUFSS) was used as an indicator of support available to participants. The mothers’ assessment was used to measure her own health and her child’s health, as well as her experiences of motherhood. Outcome data were collected through postal questionnaires distributed 12 months and 18 months after randomisation. Interpreters were available to all trial women who required help completing the outcomes questionnaires. Because of the nature of the interventions, it was not possible for either the trial participants or the researchers to be blinded to group allocation. Data entry staff were not involved in recruitment or data collection. They were blind to allocation at the second follow up, but not at the first follow up, when the questionnaires contained an additional section for the two intervention arms of the trial.

The sample size was based on a power calculation using child injury as the outcome measure. Based on an estimated cumulative incidence of injury of 35% (injuries requiring medical attention) in the first two years of life, a study of 800 participants (400 intervention: 400 control) would have over 80% power to detect a risk ratio of 0.70 at the 0.05 level of significance, allowing for 10% loss to follow up. Results from a systematic review of previous trials had shown that an intervention effect of this magnitude might be expected. A study of this size would also have the power to detect a 12% reduction in the prevalence of depression (from 40% to 28%). We had originally planned to examine only one method of providing social support, the SHV intervention. However, at the commissioning stage, the funding body asked that we compare both professional and non-professional social support within the trial. We therefore divided the intervention group into two groups of 200 participants. This would allow for an analysis that combined the two support groups thus comparing supported mothers with unsupported mothers, as well as a comparison (albeit with less power) of each support group with the control group.

Analysis was carried out on an intention to treat basis. Initially the supported mothers were compared with the control group mothers on outcome variables; subsequently each intervention arm was compared with the control group on these variables. Results are expressed as relative risks with 95% confidence intervals. The bootstrap statistical method was used to calculate mean differences to allow for non-normal distributions of these statistics.

Process evaluation: methods
The process evaluation aimed to describe what the intervention entailed, how much of it people received, and what they felt about it. It included: questions asked in the second follow up questionnaires about the participants’ experiences of their involvement in the SSFH study; transcribed interviews with SHV intervention group women; formal interviews with, and

### Table 1: Baseline characteristics of participants by trial arm. Values are numbers (percentages) unless stated otherwise

<table>
<thead>
<tr>
<th></th>
<th>Support health visitor intervention (n = 183)</th>
<th>Community group services intervention (n = 184)</th>
<th>Control group (n = 364)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study child is mother’s first baby</td>
<td>87 (48)</td>
<td>92 (50)</td>
<td>176 (48)</td>
</tr>
<tr>
<td>Mother’s age at birth of index child mean (SD) (years)</td>
<td>29.5 (5.9)</td>
<td>29.7 (5.9)</td>
<td>29.6 (5.8)</td>
</tr>
<tr>
<td>Baby’s age at baseline (weeks) mean (SD)</td>
<td>9.0 (3.5)</td>
<td>9.6 (3.8)</td>
<td>9.2 (3.2)</td>
</tr>
<tr>
<td>Mother defines ethnicity as “white”</td>
<td>99 (54)</td>
<td>104 (57)</td>
<td>217 (60)</td>
</tr>
<tr>
<td>English not mother’s first language</td>
<td>73 (40)</td>
<td>70 (38)</td>
<td>139 (38)</td>
</tr>
<tr>
<td>Mother is a lone parent</td>
<td>53 (29)</td>
<td>47 (26)</td>
<td>89 (25)</td>
</tr>
<tr>
<td>Family lives in “public” housing</td>
<td>127 (69)</td>
<td>126 (69)</td>
<td>257 (71)</td>
</tr>
<tr>
<td>Mother left full time education &lt;16 years</td>
<td>14 (8)</td>
<td>23 (13)</td>
<td>32 (9)</td>
</tr>
<tr>
<td>Weekly household income &lt;£200</td>
<td>90 (56)</td>
<td>95 (56)</td>
<td>169 (54)</td>
</tr>
<tr>
<td>Maternal depression mean (SD) — Edinburgh postnatal depression scale score</td>
<td>8.8 (5.7)</td>
<td>8.8 (5.2)</td>
<td>9.1 (5.3)</td>
</tr>
<tr>
<td>Mother smokes</td>
<td>42 (23)</td>
<td>55 (30)</td>
<td>95 (26)</td>
</tr>
<tr>
<td>Baby “difficult” to care for</td>
<td>18 (11)</td>
<td>16 (9)</td>
<td>33 (10)</td>
</tr>
<tr>
<td>Bottle feeding exclusively at baseline (9 weeks)</td>
<td>68 (37)</td>
<td>69 (38)</td>
<td>126 (35)</td>
</tr>
<tr>
<td>Mother or child/ren have “special health needs”</td>
<td>26 (14)</td>
<td>32 (17)</td>
<td>54 (15)</td>
</tr>
<tr>
<td>Mother had “no support” in past month</td>
<td>11 (6)</td>
<td>9 (5)</td>
<td>17 (5)</td>
</tr>
</tbody>
</table>

*Includes council accommodation, housing association properties, and temporary accommodation. †In this screening tool, the higher the score, the greater the likelihood of maternal depression. ‡“Special health needs” as defined by the participant.
### Table 2  Maternal outcomes at first and second follow up (12 and 18 months after randomisation)

<table>
<thead>
<tr>
<th>Maternal depression</th>
<th>Support health visitor intervention</th>
<th>Community group support intervention</th>
<th>Control group</th>
<th>Support health visitor/control Relative risk (95% CI)</th>
<th>Community group support/control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Follow up 1 — Edinburgh postnatal depression scale score above depression threshold (&gt;12)</td>
<td>38/149 26% 43/155 28% 90/303 30%</td>
<td>0.86 (0.62, 1.19)</td>
<td>0.93 (0.69, 1.27)</td>
<td></td>
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</tr>
<tr>
<td>Follow up 2 — general health questionnaire 12° score above the depression threshold (&gt;12)</td>
<td>70/136 52% 77/143 54% 145/270 54%</td>
<td>0.96 (0.79, 1.17)</td>
<td>1.00 (0.83, 1.21)</td>
<td></td>
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</tbody>
</table>

### Maternal smoking

<table>
<thead>
<tr>
<th>Maternal smoking</th>
<th>Support health visitor intervention</th>
<th>Community group support intervention</th>
<th>Control group</th>
<th>Support health visitor/control Relative risk (95% CI)</th>
<th>Community group support/control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Follow up 1 — mother is a smoker</td>
<td>39/165 24% 44/164 27% 90/327 28%</td>
<td>0.86 (0.62, 1.19)</td>
<td>0.97 (0.72, 1.33)</td>
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</tr>
<tr>
<td>Follow up 2 — mother is a smoker</td>
<td>35/145 24% 41/157 26% 73/296 25%</td>
<td>0.98 (0.69, 1.39)</td>
<td>1.06 (0.76, 1.47)</td>
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<td></td>
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</tbody>
</table>

### Maternal health (self assessed)

<table>
<thead>
<tr>
<th>Maternal health (self assessed)</th>
<th>Support health visitor intervention</th>
<th>Community group support intervention</th>
<th>Control group</th>
<th>Support health visitor/control Relative risk (95% CI)</th>
<th>Community group support/control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Follow up 1 — not very good health in last month</td>
<td>28/163 17% 29/160 18% 77/326 24%</td>
<td>0.73 (0.49, 1.07)</td>
<td>0.77 (0.52, 1.13)</td>
<td></td>
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</tr>
<tr>
<td>Follow up 2 — not very good health in past month</td>
<td>43/145 30% 49/157 31% 96/296 32%</td>
<td>0.91 (0.68, 1.23)</td>
<td>0.96 (0.72, 1.28)</td>
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</tbody>
</table>

### Social resources

<table>
<thead>
<tr>
<th>Social resources</th>
<th>Support health visitor intervention</th>
<th>Community group support intervention</th>
<th>Control group</th>
<th>Support health visitor/control Relative risk (95% CI)</th>
<th>Community group support/control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Follow up 2 — mean Duke/UNC functional social support score</td>
<td>132 18.0 (7.3) 145 18.5 (7.5) 273 18.5 (7.8)</td>
<td>DBM = 0.8 (−1.75, 0.35)</td>
<td>DBM = 0.5 (−1.59, 0.61)</td>
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</tbody>
</table>

### Experiences of motherhood: child health and development concerns

<table>
<thead>
<tr>
<th>Experiences of motherhood: child health and development concerns</th>
<th>Support health visitor intervention</th>
<th>Community group support intervention</th>
<th>Control group</th>
<th>Support health visitor/control Relative risk (95% CI)</th>
<th>Community group support/control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Follow up 1 — mother worries about child’s health</td>
<td>39/162 24% 44/164 27% 112/324 35%</td>
<td>0.70 (0.51, 0.95)</td>
<td>0.78 (0.58, 1.04)</td>
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<tr>
<td>Follow up 1 — mother worries that child development “not normal”</td>
<td>8/162 5% 5/156 3% 18/322 6%</td>
<td>0.88 (0.39, 1.99)</td>
<td>0.56 (0.22, 1.52)</td>
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<tr>
<td>Follow up 2 — mother worries about child’s speech</td>
<td>9/143 6% 26/155 17% 40/293 14%</td>
<td>0.46 (0.23, 0.92)</td>
<td>1.23 (0.78, 1.93)</td>
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<tr>
<td>Follow up 2 — mother worries about child’s eating habits</td>
<td>21/143 15% 45/155 29% 57/293 20%</td>
<td>0.75 (0.48, 1.19)</td>
<td>1.49 (1.06, 2.09)</td>
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<tr>
<td>Follow up 2 — mother worries about child’s sleeping habits</td>
<td>16/143 11% 23/155 15% 36/293 12%</td>
<td>0.91 (0.52, 1.50)</td>
<td>1.21 (0.74, 1.96)</td>
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</tr>
<tr>
<td>Follow up 2 — mean number of mother’s child development worries (SD)</td>
<td>142 0.7 (0.9) 156 1.0 (1.2) 293 0.9 (1.2)</td>
<td>DBM = 0.2 (−0.42, −0.01)</td>
<td>DBM = 0.1 (−0.10, 0.36)</td>
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</tbody>
</table>

### Health service use

<table>
<thead>
<tr>
<th>Health service use</th>
<th>Support health visitor intervention</th>
<th>Community group support intervention</th>
<th>Control group</th>
<th>Support health visitor/control Relative risk (95% CI)</th>
<th>Community group support/control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Follow up 1 — maternal use of NHS health visitor at clinic in past month</td>
<td>13/165 8% 7/164 4% 9/328 3%</td>
<td>2.87 (1.25, 6.58)</td>
<td>1.56 (0.59, 4.10)</td>
<td></td>
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</tr>
<tr>
<td>Follow up 1 — mother has spoken to NHS health visitor on telephone in past month</td>
<td>11/165 7% 1/164 1% 3/328 1%</td>
<td>7.29 (2.06, 25.77)</td>
<td>0.67 (0.07, 6.36)</td>
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<tr>
<td>Follow up 1 — maternal use of general practitioner (GP) in past month</td>
<td>71/165 43% 67/164 41% 152/328 46%</td>
<td>0.93 (0.75, 1.15)</td>
<td>0.88 (0.71, 1.10)</td>
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</tr>
<tr>
<td>Follow up 1 — maternal use of social worker in past month</td>
<td>7/165 4% 2/164 1% 3/328 1%</td>
<td>4.64 (1.22, 17.71)</td>
<td>1.33 (0.22, 7.90)</td>
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<tr>
<td>Follow up 1 — maternal use of hospital doctor in past month</td>
<td>20/165 12% 21/164 13% 43/328 13%</td>
<td>0.92 (0.56, 1.52)</td>
<td>0.98 (0.60, 1.69)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Follow up 1 — maternal use of midwife in past month</td>
<td>6/145 4% 8/158 5% 35/298 12%</td>
<td>0.35 (0.15, 0.82)</td>
<td>0.43 (0.20, 0.91)</td>
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</table>

*In the EPDS and the GHQ12, the higher the mean score, the greater the likelihood of depression. †Maternal self assessment—asked to choose between “good” and “not very good” health. ‡In the DUFSS, the higher the mean score, the less satisfactory the social support received. DBM, difference between means.
Table 3: Outcomes for children at first and second follow up (12 and 18 months after randomisation)

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Support health visitor intervention</th>
<th>Community group support intervention</th>
<th>Control group</th>
<th>Support health visitor/control Relative risk (95%CI)</th>
<th>Community group support/control Relative risk (95%CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child injury requiring medical attention</td>
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<tr>
<td>Follow up 1—child injured (previous six months)</td>
<td>24/164 15%</td>
<td>19/161 12%</td>
<td>48/326 15%</td>
<td>0.99 (0.63, 1.56)</td>
<td>0.80 (0.49, 1.32)</td>
</tr>
<tr>
<td>Follow up 2—child injured (previous six months)</td>
<td>12/145 8%</td>
<td>14/156 9%</td>
<td>27/295 9%</td>
<td>0.90 (0.47, 1.73)</td>
<td>0.98 (0.53, 1.81)</td>
</tr>
<tr>
<td>Combined follow up 1 and 2—child injured in previous 12 months</td>
<td>32/165 19%</td>
<td>29/163 18%</td>
<td>64/328 20%</td>
<td>0.99 (0.68, 1.45)</td>
<td>0.90 (0.61, 1.34)</td>
</tr>
<tr>
<td>Child health (maternal assessment)*</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Follow up 1—child health—not very good generally</td>
<td>6/165 4%</td>
<td>9/164 6%</td>
<td>22/321 7%</td>
<td>0.53 (0.22, 1.28)</td>
<td>0.80 (0.38, 1.70)</td>
</tr>
<tr>
<td>Follow up 2—child health—not very good generally</td>
<td>9/144 6%</td>
<td>9/157 6%</td>
<td>18/297 6%</td>
<td>1.03 (0.48, 2.24)</td>
<td>0.95 (0.44, 2.06)</td>
</tr>
<tr>
<td>Infant feeding</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Follow up 1—mothers who ever breast fed†—but had stopped by 26 weeks</td>
<td>77/140 55%</td>
<td>76/140 54%</td>
<td>134/277 48%</td>
<td>1.14 (0.94, 1.38)</td>
<td>1.12 (0.92, 1.36)</td>
</tr>
<tr>
<td>Follow up 1—introduction of solid foods before 16 weeks</td>
<td>42/160 26%</td>
<td>40/159 25%</td>
<td>70/317 22%</td>
<td>1.19 (0.85, 1.66)</td>
<td>1.14 (0.81, 1.66)</td>
</tr>
<tr>
<td>Child's health service use in previous month</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Follow up 1—child had visits to general practitioner (GP) at surgery/clinic</td>
<td>63/165 38%</td>
<td>78/162 48%</td>
<td>161/326 49%</td>
<td>0.77 (0.62, 0.97)</td>
<td>0.97 (0.80, 1.18)</td>
</tr>
<tr>
<td>Follow up 1—child had visits to NHS health visitor at clinic</td>
<td>52/165 32%</td>
<td>52/162 32%</td>
<td>103/326 32%</td>
<td>1.00 (0.76, 1.31)</td>
<td>1.02 (0.77, 1.34)</td>
</tr>
<tr>
<td>Follow up 1—child had visits from NHS health visitor at home</td>
<td>11/165 7%</td>
<td>8/162 5%</td>
<td>9/326 3%</td>
<td>0.69 (0.56, 1.19)</td>
<td>0.86 (0.54, 1.39)</td>
</tr>
<tr>
<td>Follow up 1—child had visits to hospital doctor</td>
<td>22/165 13%</td>
<td>21/162 13%</td>
<td>49/326 15%</td>
<td>0.98 (0.74, 1.32)</td>
<td>0.81 (0.47, 1.41)</td>
</tr>
<tr>
<td>Follow up 1—child had visits to accident and emergency department</td>
<td>46/159 29%</td>
<td>40/150 27%</td>
<td>83/312 27%</td>
<td>1.09 (0.80, 1.48)</td>
<td>1.00 (0.73, 1.38)</td>
</tr>
<tr>
<td>Follow up 2—child had visits to GP surgery/clinic</td>
<td>53/145 37%</td>
<td>71/158 45%</td>
<td>114/298 38%</td>
<td>0.69 (0.74, 1.24)</td>
<td>0.17 (0.94, 1.47)</td>
</tr>
<tr>
<td>Follow up 2—child had visits to NHS health visitor at clinic</td>
<td>23/145 16%</td>
<td>18/158 11%</td>
<td>34/298 11%</td>
<td>1.39 (0.85, 2.27)</td>
<td>1.00 (0.58, 1.71)</td>
</tr>
<tr>
<td>Follow up 2—child had visits to accident and emergency department</td>
<td>28/144 19%</td>
<td>35/157 22%</td>
<td>56/296 19%</td>
<td>1.03 (0.68, 1.54)</td>
<td>1.18 (0.81, 1.73)</td>
</tr>
<tr>
<td>Child's use of medication in the previous week</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Follow up 1—child given any medication</td>
<td>109/165 66%</td>
<td>107/164 65%</td>
<td>203/328 62%</td>
<td>1.07 (0.93, 1.23)</td>
<td>1.05 (0.92, 1.21)</td>
</tr>
<tr>
<td>Follow up 1—child given antibiotics</td>
<td>17/165 10%</td>
<td>15/164 9%</td>
<td>35/328 11%</td>
<td>0.97 (0.56, 1.67)</td>
<td>0.86 (0.48, 1.52)</td>
</tr>
<tr>
<td>Follow up 1—child given asthma medication</td>
<td>2/165 1%</td>
<td>2/164 1%</td>
<td>18/328 5%</td>
<td>0.52 (0.05, 0.94)</td>
<td>0.22 (0.05, 0.93)</td>
</tr>
<tr>
<td>Follow up 1—child given skin ointment</td>
<td>23/165 14%</td>
<td>39/164 24%</td>
<td>83/328 25%</td>
<td>0.55 (0.36, 0.84)</td>
<td>0.94 (0.67, 1.31)</td>
</tr>
</tbody>
</table>

*Mothers were asked to assess whether their child's health was generally "good" or "not very good". †Those mothers who reported ever having started breast feeding with their baby, both exclusive and mixed bottle and breast feeding. Proportions ever breast feeding in each trial arm: 86% SHV, 86% CGS, 85% control.
Informal feedback from, the community groups; interviews at
two points in the study with the SHVs; and forms filled in by
both SHVs and community groups concerning their contacts
with the women in the study.

The methods and results of the economic evaluation will
not be discussed in this paper, but are published elsewhere.14

**Ethics**

The Institute of Child Health Research Ethics Committee and
the Local Research Ethics Committee of the Camden and
Islington Community Health Services NHS Trust approved
the study protocol.

**RESULTS**

**Participants**

A total of 731 women were recruited to the study (fig 1). Of
these, 108 did not speak English and required the use of an
interpreter. Interpreters were used for 25 different languages
(not shown in figure). Just under half of the women were
first time mothers (table 1). Response rates at the two follow
up points were 90% and 82%.

**Interventions**

Uptake of the SHV intervention was high, with 172 of the 183
women allocated having at least one visit (94%). The women
allocated to the SHV intervention received an average of
10 hours of support provided in seven home visits and
additional telephone contacts.

The community groups providing the CGS intervention
were asked to take the initiative in contacting the women
assigned to them, but otherwise to provide their normal
service. Uptake of the service was low—only 35 women of the
184 allocated (19%). Uptake was highest among community
groups that offered home visiting as at least part of their
service. On average the women allocated to the CGS
intervention received one and a half hours of support.

**Maternal outcomes**

The utility of an analysis based on combining the two support
arms was reduced by the low uptake of the community group
support. We therefore present results in this paper as each
arm compared with control. Details of the
combined analysis are available in the full report.11 Table 2
shows data on maternal outcomes. Although the proportion
scoring above the depression threshold on the EPDS was
slightly lower for both interventions when compared with the
control group at first follow up, there was no conclusive
evidence that either intervention reduced the prevalence of
depression (risk ratio SHV/control 0.86 (95% confidence
intervals 0.62 to 1.19); CGS/control 0.93 (0.69 to 1.27)). Similarly,
maternal smoking levels were not appreciably reduced by the interventions (SHV: 0.86; 0.62 to 1.19, CGS: 0.93 (0.69 to 1.27)).

At first follow up SHV women had fewer visits in the
previous 12 months was similar for all arms of the trial (SHV:
0.99; 0.68 to 1.45, CGS: 0.91; 0.61 to1.36) (table 3). No
notable differences were found in child health or infant
feeding outcomes. However, at first follow up, fewer SHV
children had been taken to the GP or to hospital doctors, and
more had had visits from NHS health visitors at home.

**Process evaluation**

Process data showed that most (85%) of the women allocated
to the SHV intervention were positive about the support they
were given. The highest levels of use were among English
speaking white women. The low level of uptake of the CGS
intervention was matched by higher levels of dissatisfaction
among those who did use it. Proportionally more (49% v 40%)
non-English speaking women used the CGS compared with
the SHV intervention. Dissatisfaction with, and non-use of,
the CGS intervention were related to perceptions of the
services offered as personally or culturally inappropriate or
unnecessary.

**DISCUSSION**

In this randomised controlled trial the offer of visits from
health visitors trained to focus exclusively on supporting
mothers resulted in some limited benefit over routinely
available services, but there was no evidence of an impact on
the primary outcomes of depression, smoking, and child
injury. SHV women had different patterns of health service
use, with fewer making use of GPs and twice as many using
NHS health visitors. SHV women also had less anxious
experiences of motherhood than control women.

The evidence from the SSFH study is that offering
community group support to women does not result in a
large enough take up, or have a dramatic enough effect on
those who do use it, to change the health outcomes of
maternal wellbeing and childhood injury.

The apparent inability of either intervention significantly to
improve major health outcomes is consistent with the views
stated in the process evaluation by the providers of both
interventions. The view was expressed that social support
alone, whether given by health visitors or community
services, is unlikely to be able to counteract the health
damaging effects of social and material disadvantage,
including the stresses and difficulties that are a normal part
of many mothers’ lives in countries such as the UK today.
(A full report of the process evaluation will be published
elsewhere.)

**Methodological considerations**

Strengths of this trial included that allocation was well con-
cealed, potential confounders were balanced in randomisation,
an intention to treat analysis was carried out, and outcome data were collected for 90% of the randomised participants. As far as we are aware, it is unusual to have the kind of inclusive recruitment practices found in this trial\textsuperscript{14, 15}; recent British trials of social support have excluded women who did not speak English.\textsuperscript{16, 17}

Limitations of this study included the poor uptake of one of the interventions and the possibility that the interventions were inappropriate for this population. Less than one in five of the women allocated to the CGS intervention made any use of the service to which they were assigned. This poor uptake mirrors that found by another recent trial of postnatal support offered through community groups.\textsuperscript{18} As outcome data about effects of the two interventions were analysed on an intention to treat basis, results for the CGS arm are likely to have been significantly diluted by this low level of uptake. As such, a statistical comparison of supported compared with non-supported mothers would have been of little value. The existence of contamination bias in the study cannot be ruled out, but there is no evidence from our extensive process evaluation that it occurred with the SHV intervention. However, about 1% of control women received services from community groups in the CGS intervention; the impact of this on the trial results was very limited.

The sample size was large enough to show significant differences in the primary outcomes. However, having two interventions instead of one (at the request of the funding body) did cut the statistical power. Although the SSFH study is one of the largest randomised controlled trials of a social support intervention conducted to date, we cannot exclude the possibility that we may have missed modest but worthwhile intervention effects. An update of a Cochrane systematic review of randomised controlled trials of home based social support, currently in progress,\textsuperscript{19} will set the results of the SSFH study in the context of all previous trials of this intervention and will increase the precision of the estimates of the intervention effects. Both interventions trialled in the SSFH study were postnatal only and of limited duration; it is possible that longer interventions spanning both antenatal and postnatal periods might have been more effective. However, process data did not suggest that mothers perceived these limitations as significant. In other areas of health promotion such as depression, alcohol use, and recovery from surgery, brief interventions have been found to be effective, and sometimes more cost effective than larger ones.\textsuperscript{20–23}

One result of the ethnically diverse sample included in the SSFH trial was a lower uptake of both interventions among women whose first language was not English. Process data suggest that the individualised model of support underlying the SHV intervention, with intensive face to face contact between the health visitors and the women, may have conflicted with dominant cultural values, and thus have been received as inappropriate, for some of the women whose first language was not English. Use of interpreters to deliver the SHV intervention to some women may have influenced the acceptability and impact of the intervention. (We intend to explore this issue in a further paper.)

Implications

The SSFH study suggests that offering community group support services does not measurably have an impact on the health of families. If these services are to have the potential for this effect, then more targeted ways may need to be devised for promoting their use. This may have implications for the Children’s National Service Framework and initiatives such as Sure Start.

To target more effectively the primary outcome of maternal depression, further research should be undertaken exploring interventions offered at more targeted times in the postnatal period, as well as more appropriate interventions for culturally diverse populations.

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