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'Don't shake the baby': towards a prevention strategy

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Summary

This paper reports on the findings of a study on the extent to which carers felt like shaking, and shook, their babies and young children and the circumstances surrounding the feelings and/or actions of shaking. The research was designed to inform a 'Don't Shake Your Baby' campaign planned by the prevention sub-committee of the London Borough of Newham's Area Child Protection Committee. The main findings from interviews with 83 mothers, and self-completion questionnaires completed by 152 secondary school students, are discussed. Recommendations for a prevention programme are suggested in light of the findings.

The dangers of shaking babies have been highlighted by recent high profile court cases which have received the full force of media attention. Both the Louise Woodward and Helen Stacey cases were unusual in that the prosecution case centred on shaking as the cause of death. More typically, the possible harm caused by shaking a baby has received little attention compared to child abuse which has resulted in more visible bruising or broken bones. However, whilst bruises heal and bones usually mend, for a baby who is shaken and survives, the damage can be permanent; the blood vessels break and bleed as the brain impacts repeatedly against the skull and this can cause paralysis or, in less severe cases, a long-term learning impairment (Caffey, 1972).

With high profile court cases recently serving to raise public awareness that shaking a baby can cause death, social services departments' concerns have also been increasing over the last few years. A number of campaigns, including those by the NSPCC and by some Area Child Protection Committees (ACPCs) in Sheffield, Wakefield, Wandsworth and Kent, have aimed to raise awareness of the dangers of shaking to prevent its occurrence. Despite these campaigns, and others, the ACPC Prevention Sub-committee in the London Borough of Newham found that there was a lack of information about the extent of babies being shaken, who does it, and under what circumstances. They also found that there were few studies from which they could develop an effective preventive strategy, and the members of this inter-agency prevention group realized that anecdotal evidence from their own experiences was an insufficient base from which to launch a campaign. For these reasons, the sub-committee put a research project out to tender. This paper reports on the findings of the study commissioned in 1996.

The research had a limited budget and a limited timescale of three months (see Sampson and Shepherd, 1996; Shepherd *et al.*, 1997). The sub-committee's interests in the findings were very practical; they wanted a 'flavour' of the problem and related issues for the purpose of running a prevention campaign. A highly methodologically rigorous research project was neither commissioned nor required.

Given the framework within which the research took place, the findings are necessarily tentative and require further 'testing'. Nevertheless, in our view, the findings were sufficiently robust to inform Newham's 'Don't Shake the Baby Campaign' and to highlight an urgent need for further study. Without better information, preventive programmes are likely to have limited impact and, if the prevalence and lack of awareness of the problem is as widespread as this modest study suggests, there is some grave cause for concern. Poorly resourced local initiatives are unlikely to be sufficient to tackle the scale of the problem.

Shaking babies: what we know

The academic literature is mainly American and tends to be written from a medical perspective, using data from hospital records and sometimes based on fewer than 30 cases (Ludwig and Warman, 1984; Krugman, 1985; Alexander *et al.*, 1990; Fischer and Allasio, 1994). The findings from most of the studies are therefore drawn from samples of reported incidents which have come to the attention of the medical professionals and which constitute severe cases of child abuse. It appears there is little recent American literature and, to our knowledge, there are no British studies specifically on shaking.

The American literature does, however, provide an historic overview of the way in which an understanding of shaking babies is being developed. The term 'shaken baby syndrome' (SBS) has been developed by the medical profession, over a period of time, to describe a whole range of specific conditions and symptoms presented by a baby or young child brought into hospital accident and emergency departments. The following definition outlines the way in which SBS is commonly recognized today: 'The shaken baby syndrome (SBS) usually implies the application of repeated forces over one or more episodes' (Alexander *et al.*, 1990). However, as early as 1946, Caffey was studying babies under the age of 13 months whose symptoms were multiple fractures in the long bones and also chronic subdural haematoma (Caffey, 1946) and, by 1972, these symptoms were considered to be caused by whiplash-shaking or jerking of infants (Caffey, 1972). By the mid-1980s, studies were being carried out into fatal head injuries of babies and it was considered that shaken baby syndrome was responsible for many of these. Reference was made to the use of computer cranial tomography (CCT) which could more accurately diagnose SBS, and specific symptoms such as retinal haemorrhages were considered to be important indicators leading to an SBS diagnosis (Ludwig and Warman, 1984; Billmire and Myers, 1985; Showers *et al.*, 1985). SBS is usually a clinical diagnosis, made by a doctor. The available studies indicate that it is infants under the age of 12 months who most commonly receive an SBS diagnosis, although this was found to vary from babies as young as four weeks to those as old as four years (Caffey, 1972; Billmire and Myers, 1985; Ludwig and Warman, 1984; Krugman, 1985; Showers *et al.*, 1985; Alexander *et al.*, 1990). One study of 20 shaken babies, in

which the average age of the victims was 5.8 months, suggests that, the younger the child, the more vulnerable they are to this type of injury (Ludwig and Warman, 1984).

Even though the vulnerability of babies' heads and brains makes them particularly susceptible to death and brain damage when shaken, the American studies suggest that there is generally a low level of awareness of the potential consequences of shaking a baby or young child (Caffey, 1972, p. 161). From the early 1970s, Caffey highlighted the need for a greater public awareness of the dangers of shaking:

Many well intentioned, responsible parents, who think nothing of giving a small child a 'good' shaking or a series of shakings, would not dream of giving their child a series of 'good' blows or punches on the head. Yet, the cumulative pathogenic effects of repeated mild or moderate whiplash-shakings of the head, though inapparent clinically, may be far more grave than single, even if heavy, blows or punches to the head (Caffey, 1972, p. 165).

Despite Caffey's pioneering work, analysis of five different studies carried out in the early 1990s revealed that between 25 and 50 per cent of parents or prospective parents did not know about the dangers of shaking babies (Showers, 1992).

The literature shows that finding out about the prevalence among parents or carers of feeling like and actually shaking a baby is problematic and always likely to be an underestimate. Ludwig and Warman, in a review of 20 cases of shaken baby syndrome (SBS), concluded, somewhat unsurprisingly, that 'parents were rarely forthright in admitting their loss of control' (Ludwig and Warman, 1984, p. 105). SBS can also be very difficult to diagnose and, as a consequence, many cases presented to doctors and medical staff are not identified. Victims do not necessarily have visible injuries pertinent to abuse or neglect (Ludwig and Warman, 1984; Showers *et al.*, 1985), and similar types of injuries to the head may be produced deliberately or accidentally (Billmire and Myers, 1985). Nevertheless, in their study of 24 victims, Alexander *et al.* (1990) found that over half had been subjected to repeated abuse, including 'traumatic injuries', suggesting that doctors could be alerted to the problem through repeat visits. In another study a quarter of the 72 babies under the age of two, who were studied, (the majority of whom died from severe head injury resulting from abuse or neglect), already had a documented history of abuse or neglect (Showers *et al.*, 1985, p. 69). In a further study of 25 babies diagnosed with SBS following admission to an American hospital, just under one-fifth of those who had survived were reinjured after being sent home (Fischer and Allasio, 1994, p. 696).

It has been argued that, with the advent of closed circuit television (CCTV), SBS can be more accurately diagnosed. Research suggests that this has not necessarily occurred, however (see for example, Ludwig and Warman, 1984). Rather than detection occurring through clinical investigations, it has been found that an SBS diagnosis was more likely to result where injuries were incompatible with the history given (Billmire and Myers, 1985). Furthermore as Caffey (1972) observed, 'whiplash-shaking' appears to be a widespread practice and is considered as a 'casual' form of violence, with the consequence that it is rarely mentioned by either parents or doctors in medical histories, and 'both its frequency and potential pathogenicity are consistently depreciated and ignored' (Caffey, 1972, p. 168). Despite this, Ludwig and Warman (1984) state that there has been a steady increase in the number of reported SBS cases in the United States—although they do not support their

statement with any figures to confirm this trend. These authors argue that the increased reporting is due to a growing awareness of SBS as a cause of death and brain damage. Some years later, a study by Showers *et al.*, (1985) found that, in 13 per cent of fatal child abuse cases studied over a 20 year period, the cause of death was shaking.

Unlike the literature on other forms of child abuse, the SBS literature has yet to examine social and economic factors which may contribute towards parents/carers shaking babies and young children. The most frequently cited triggers to hard shaking are colic and inconsolable crying (Krugman, 1985, p. 69; Showers, 1992, p. 12) but there is little knowledge about other factors which may or may not explain the behaviour of perpetrators. The studies by Showers do shed some light: she found that many of the SBS incidents were perpetrated by men (Showers, 1992, p. 17) and more specifically, that the most frequent abusers were the boyfriends of the victims' mothers (Showers *et al.*, 1985, p. 69). Showers also found that those most frequently involved in fatal child abuse have been aged in their early 20s (Showers *et al.*, 1985). More recent research, analysing medical charts of 151 cases of SBS, found that just under two-thirds of the victims were boys. Fathers, stepfathers and mothers' boyfriends were responsible for 60 per cent of the injuries; more precisely, in 37 per cent of cases, fathers were the perpetrators, boyfriends in 20 per cent, and mothers in 13 per cent of cases. In addition, in 17 per cent of cases, female baby-sitters were responsible for injuring babies through shaking them (Starling *et al.*, 1995).

Recommendations for dealing with SBS tend to focus on coping with the problem once it has occurred, rather than on recommendations to prevent shaking. It has been argued: that administrative systems need to be initiated to gather information in cases of unexplained injury or death (Showers *et al.*, 1985); that parenting skills should be verified among carers of babies and young children given the high incidence of mothers' boyfriends as abusers (Showers *et al.*, 1985); and that doctors working in accident and emergency units in hospitals should be alert to making SBS diagnoses, institute prompt treatment for acute head trauma, and also avoid infants being wrongly treated for other illnesses (Ludwig and Warman, 1984). Particularly relevant for Newham's campaign is the recommendation that the public needs to be educated about the dangers of shaking babies (Showers *et al.*, 1985; Caffey, 1972; Showers, 1992).

There is some support, too, for an educational programme from a study involving 15,000 mothers of new-born babies who were given a 'Don't Shake the Baby, information pack (Showers, 1992). Just under a quarter (21 per cent) completed an evaluation form. Almost half (49 per cent) of these mothers said that, having read the information, they would be less likely to shake their babies. The research did not follow up these women to ascertain if they did have a lower incident rate of shaking than other mothers, even though this would have been the 'acid' test of the effectiveness of the information pack. There is no information, either, on the other women on whom the pack appeared to have had no effect, including whether this was due to prior knowledge of the dangers of shaking babies or continued ignorance or ignoring of these. The present study suggests that the link between raising awareness and preventing shaking may be complex, and that preventive strategies involving more than simple awareness-raising may be required.

The east London study

The ACPC's tender documents for the research framed the issue of shaking babies and young children within the context of the borough's economic and social indicators: high mortality and morbidity rates among children under five, high birth rate, high unemployment rates, overcrowding within the home, and so on (Griffiths, 1994). It was within this context that the research took place.

Information was obtained from three groups of people: mothers, fathers, and women currently caring for a baby in the London Borough of Newham (LBN); fathers employed by the University of East London (UEL); and teenage students attending two secondary schools in LBN. Difficulties were experienced in accessing fathers for interview; only ten fathers were interviewed in total. Since this sample was so small it was decided to send 300 self-completion questionnaires to a randomly selected group of men employed by the University of East London. Whilst the response rate was above average, the fathers were not representative of men in Newham in relation to age, ethnicity or socio-economic status. In addition, many of the questions were left unanswered and, for the majority of fathers who completed the questionnaire, the children they were describing were now grown up. It has therefore been decided not to include these findings in this paper.

Of the 83 mothers seen, 45 were interviewed at parent and toddler groups, 20 at baby clinics within health centres, and five at a parents' group for children attending a local special needs school; two were located via a children's centre, three via an English as a Second Language group, two through an Asian women's group, and two from a community project. The women who were attending a group or clinic were selected at random during the researcher's visit. Even though few women refused to be interviewed ($n = 5$) the respondents may not have been chosen from a representative sample of women. An analysis of the personal characteristics of these women suggests, however, that whilst they may have varied in more subtle ways, (such as in attitudes and behaviour towards childcare), compared to women who did not attend groups or clinics, they appeared to share similar characteristics with women living in Newham at the time of the 1991 census. It therefore seems reasonable to assume that the women in this study fairly representative of women living in Newham, and those interviewed were similar in ethnicity to women living in Newham (Table 1). Over two-thirds (68 per cent) of the women were aged between 26 and 35 years at the time of the interview and, as a group, their ages ranged from 15 to over 40 years (Table 2).

Information collected on when these women first became mothers shows that, whilst almost a quarter were aged between 15 and 20 years (22 per cent), two-thirds were aged 21 to 30 years (66 per cent) (Table 3). Twenty-nine per cent of the women were single parents, compared to an average of 19 per cent in Newham (Griffiths, 1994), and most (84 per cent) were not in paid employment. With respect to the whole sample of 83 women, a third (33 per cent) of the women were in paid employment or on maternity leave and, apart from one woman who was a nanny, only three women worked full-time outside the home. Thirty-nine per cent of the women in two parent families had part-time work.

The 83 women interviewed in depth were not made aware of the ACPC's

Table 1 The ethnicity of women living in the London Borough of Newham and the ethnicity of the women interviewed

Ethnic group	Newham (%)	Women interviewed (%)
Asian	26	15
Black African	6	16
Black Caribbean	7	8
Black other	2	2
White	58	53
Chinese	1	–
Other ^a	1	6

^a The category 'other' for the Newham women interviewed comprises women who identified themselves as mixed race.

Source: 1991 Census data.

Table 2 The ages of the women

Age	Percentage	Women (n = 83)
15–20	1	1
21–25	17	14
26–30	45	37
31–35	23	19
36–40	13	11
40+	1	1

Table 3 The ages of the women when they first became mothers

Age range	Percentage	Women (n = 82*)
15–20	22	18
21–25	37	31
26–30	29	24
31–35	11	9
36–40	1	1

N = 82. One woman was not included as she was a nanny.

involvement because of the fear and stigma surrounding child protection and social services.¹ They were informed that the research was concerned with finding out from parents and carers what they found particularly stressful and demanding about looking after babies and young children. It was made clear that any information provided by interviewees would be treated with the utmost confidentiality and anonymity, and that interviewees need not answer any questions they found intrusive. The interview schedule was semi-structured and most questions were open-ended to enable interviewees to talk freely. On occasions, when parents became upset or distressed, the interviewer, an experienced counsellor, sought to reassure them and provided contact numbers of self-referral support services. The research process itself raised awareness about the dangers of shaking babies; when women were not aware that shaking could kill or cause brain damage, the researcher explained this to them at the end of the interview.

Of particular concern for some members of the Prevention Sub-committee was the need to identify the level of awareness of the dangers of shaking babies amongst young people who may have siblings who are babies, who are old enough to baby-sit either their own siblings or other people's children, and who are the next generation of parents. Three schools participated in the research. All the schools were located in the London Borough of Newham; one school was mixed sex, one took only girls and the other only boys. Teachers administered the self-completion questionnaires to their classes, with 152 being completed by the students aged 14 or 15 years old. Fifty-three per cent of the questionnaires were completed by girls and 47 per cent by boys. Just over a quarter (28 per cent) of respondents had siblings under the age of five, and just under a third (30 per cent) baby-sat regularly for other people's children.

The majority of the questionnaires were completed by Asian young people (59 per cent). Just over a quarter of those who completed the questionnaire were black (28 per cent) and 12 per cent were white. In terms of ethnicity, this sample is heavily biased towards Asian respondents and was not representative of Newham as a whole. Many of the key questions were left unanswered which is, in itself, a significant finding. Twenty-nine of the school students (19 per cent) did not answer the awareness question and, of the students who had a younger brother or sister under five or who baby-sat (77 students), only just over half answered the question about shaking.

The unrepresentativeness of the sample of school students means it is difficult to make generalized statements with any certainty, although it provided a useful base for the purpose for which it was intended: to inform a prevention campaign. In addition, the different methods employed in the two main strands of the study, semi-structured interviews and self-completion questionnaires, meant that there was little scope for comparisons between the responses of the mothers and those of the school students. For example, mothers were asked an open-ended question about

¹ Not informing respondents of the ACPC's involvement or indeed, the fact that shaking babies was the focus of the research was a decision taken jointly by the researchers and the ACPC. This decision was taken on the basis that harm would not come to respondents and that steps were taken, as described above, to offer them support during the interview, and also to inform those who did not know already about the dangers of shaking babies.

their awareness of the dangers of shaking, as against the equivalent question asked of students which provided multiple choice responses. This further limited the scope of the data analysis. Bearing in mind these methodological limitations, the findings are presented below.

Findings

The findings are discussed in two sections; the first is about the mothers/female carers and the second about the findings from the school students. Some specific implications of the findings for a prevention campaign are drawn out in each of the sections.

Mothers

The data were first analysed for all the women as a whole and then, for some variables, the women were divided into three groups: those who had shaken their baby, those who had felt like shaking their baby and those who said they had not felt like shaking their baby.² Respondents were asked about a range of issues and potential contributory factors at the personal, social and economic levels. These indicators derived from the literature, from piloting the interview schedule and from consultation with the ACPC. Analyses according to these groupings do show some differences between the women in terms of contributory factors to shaking.

A third ($n = 28$) of the women interviewed admitted that they had either felt like shaking or had shaken their baby. Ten per cent of the women ($n = 9$) said they had actually shaken their baby and just under a quarter ($n = 19$) said they had felt like shaking or had shaken their baby. Ten per cent of the women ($n = 9$) said they had actually shaken their baby and just under a quarter ($n = 19$) said they had felt like shaking their baby. Overall, just over half the women (53 per cent) were aware of the dangers of shaking babies; that is, they mentioned death or brain damage as effects of shaking when asked what could happen if a baby was shaken. Differences were found between the three groups: 54 per cent of women who had not felt like shaking their baby were fully aware of the dangers, compared with 63 per cent who had felt like shaking and 33 per cent who had actually shaken their baby. Whilst the numbers are small, this suggests that the more aware people are of the dangers, the less likely they are to shake their baby. This finding therefore supports the introduction of a campaign to increase awareness of the dangers of shaking.

Even though the numbers are even smaller when broken down by ethnic group, the data suggest differences in awareness between ethnic groups (see Table 4). For the purposes of a prevention campaign, these findings suggest the need for all ethnic groups to be targeted and for campaign messages to be delivered in community languages.

² These categories were based on women self-reporting. It is difficult to know the full extent of the problem as it may be that additional women have felt like shaking or have shaken their baby, but did not admit it whilst being interviewed.

Table 4 Awareness levels by ethnic group

	Awareness levels (%)
African	31 (4 of 13)
African-Caribbean	43 (3 of 7)
Asian	42 (5 of 12)
Black other	100 (2 of 2)
Mixed race	60 (3 of 5)
White English	63 (26 of 41)
White other	33 (1 of 3)

N = 83

Possible contributing factors to women having felt like shaking or actually shaking their baby were identified (Table 5). As can be seen from Table 5, having a baby who cried a lot was found to be the most significant difference between those who had not felt like shaking and those who had either felt like or who had actually shaken their baby. Statistically the association between a crying baby and having felt like/actually shaking a baby was strong and significant, with a chi square value of 23.968.³

'Crying a lot' was something that was not defined in terms of hours or minutes, but was based on the woman's subjective admission of her baby crying 'a lot', 'all the time', 'persistently', 'most of the time' and so on. The effect of persistent crying on the women can be understood within the context of the majority finding that it was harder to be a mother than they had expected, and that they had not thought that caring for babies would be so physically demanding or a 24-hour job. Many found their new daily routine restrictive, and said that they lacked freedom and opportunities for spontaneous activities. Caring for babies was not an entirely negative experience, though; many of the women liked having someone to care for, going to playgroups and meeting other mothers. Nevertheless, in considering the difficulties experienced by women, the trigger to shaking or feeling like shaking seems to

Table 5 Possible contributory factors to shaking, and feeling like shaking babies

	Felt like shaking/had shaken baby (<i>n</i> = 28)		Had not felt like shaking baby (<i>n</i> = 55)	
	%	<i>n</i>	%	<i>n</i>
Baby who cried a lot	93	26	36	20
Planned pregnancy	79	22	47	26
Felt isolated	75	21	51	28
Housing problems	50	14	43	24
Money problems	64	18	51	28
Relationship problems	57	16	45	25
Post-natal depression	43	12	31	17
Support and help with child care	64	18	62	34
Single parents	29	8	29	16
Two parents	71	20	67	37

³ In clarifying the strength of this association, we acknowledge comments from one of the peer reviewers.

be a crying baby, and this is consistent with findings from an American study (see Showers, 1992).

One woman interviewed by us described how she came to shake her baby when he would not stop crying:

When he wouldn't stop crying I just felt like throwing him against a wall . . . I cried and screamed and pleaded with him to stop crying then I just lost control and shook him.

Further analysis into those with/without a crying baby revealed that 92 per cent of women who said their baby did *not* cry a lot ($n = 37$) had not felt like shaking their baby.⁴ In line with findings from the literature, this clearly suggests a causal relationship between having a crying baby and having felt like shaking/shaking a baby.

Whilst those who had felt like shaking/had shaken their baby were more likely to have had a baby who cried a lot, further analysis revealed that there were also many women who had a baby who cried a lot (46 per cent) who did not feel like shaking it. In addition, it can be seen from Table 5 that 36 per cent of the women who had not felt like shaking their baby also had a baby who cried a lot. This suggests that there may be additional factors contributing to women having felt like or shaking their baby.

The second biggest difference between women who had felt like shaking/had shaken their baby and those who had not felt like doing so was in feelings of isolation. Three-quarters of the women who had felt like shaking their baby felt isolated, compared to half the women who had not. Several of the younger mothers who had been placed in local authority bed and breakfast accommodation in different boroughs talked about the difficulty of maintaining regular contact with family and friends, particularly as they received a low income and travel expenses were high. They also mentioned the difficulty of making new friends in an unfamiliar area, especially when they regarded it as a temporary location. More generally, women who were not surrounded by family or friends talked about their feelings of isolation, as did those women who had been in full-time employment prior to the birth of the baby and who were no longer employed, particularly as many of their friends worked full-time. Despite the high levels of women experiencing feelings of isolation, many of the women felt that joining parent and toddler groups had helped enable them to make new friends and thus alleviate the problem. As one woman explained:

I was new to the area and my husband worked long hours so I was alone at home with the baby for long periods of time. I started feeling really fed up and lonely . . . I saw an advert for a local parent and toddler group and eventually decided to go along. The other mothers were really nice and I've now made lots of new friends and feel much happier.

The third biggest difference between women who had felt like shaking/had shaken their baby and those who had not was in whether or not the pregnancy was planned. Of our sample, 58 per cent had planned their pregnancy. Seventy-nine per cent of

⁴ This further analysis of the two groups (those with a crying baby and those without a crying baby) and the impact of this factor on the likelihood of shaking or feeling like shaking the baby, was suggested by one of the peer reviewers.

women who had felt like shaking/had shaken their baby had planned their pregnancy, compared with 47 per cent of those who had not felt like shaking their baby (see Table 5). The relationship between high expectations and the reality of caring for a baby may have something to do with this, as one woman explained:

We'd planned for this baby and were so excited—but I hadn't banked on it being so difficult . . . I just wish someone would have told me the whole story.

However, it is difficult to know exactly how to interpret these findings, which are fairly surprising as 'common sense' might tell us that women with unplanned pregnancies would be more likely to have felt like shaking their baby. It is an area where further research could usefully be conducted, particularly to inform a prevention strategy. Further analysis has not revealed any additional explanations for this finding. It is, of course, possible that there might not be a link between unplanned pregnancies and feeling like shaking a baby.

Whilst women experiencing housing, money and relationship problems and post-natal depression were slightly more likely to have felt like/actually shaken their baby, women in single-parent families were no more likely than women in two-parent families to have felt like shaking/shaken their baby (see Table 5). In addition, the age of women did not appear, in this study, to have any impact on whether they would be more likely to have felt like/shaken a baby. Furthermore, there were only minor differences (which were not statistically significant) found between women who received help with childcare and those who did not.

Differences were found between women who had sought advice from a health professional (GP, health visitor, nurse at clinic) about the baby's persistent crying and those who had not. Of the women who had not felt like shaking their baby, 29 per cent had sought professional advice, compared with 79 per cent of those who had felt like shaking their baby and 55 per cent who had actually shaken their baby. These findings suggest several things: notably, that women who find it difficult to cope with a persistently crying baby do seek advice from health professionals, and that therefore these professionals are in an important position to offer support to women, and to play a role in preventing babies being shaken. Comparing the differences between, on the one hand, women seeking professional advice and those who have felt like shaking their baby (79 per cent) as against those who have actually shaken their baby (55 per cent), significantly more women who had felt like shaking sought professional help. It may be that the assistance the women received from the health professionals had a preventative effect, or arguably, perhaps those who had shaken their baby had already done so prior to thinking about seeking advice and were worried about the possibility of health professionals finding out and therefore did not seek their assistance.

School students

Just over two-thirds of the girls (67 per cent) and over a third of the boys (39 per cent) were aware of the dangers of shaking babies. Seventy-seven students (51 per

cent) had a brother/sister under five and/or baby-sat. Forty of these answered the question about shaking and, of these, ten admitted to having felt like shaking the baby (25 per cent). No one admitted to having actually shaken a baby in their care. Thirty per cent of the sample had brothers or sisters under the age of five. A fifth (20 per cent) of these students said that they were asked by their parents to look after the baby a lot and nearly three-quarters (70 per cent) were asked sometimes, and ten per cent said they were never asked. Most felt proud of having a baby sister/brother (72 per cent), liked to play with her/him when they were bored (60 per cent), and felt included within the parent/baby relationship (62 per cent). Just over a third (34 per cent) liked having more time to themselves because there was a younger sibling in the house and just over a quarter (28 per cent) said their parents stopped nagging them so much. Less positive experiences were felt by a minority of the students: just under a third (30 per cent) resented the time their parents spent with the baby, 14 per cent felt pushed out, and seven per cent felt jealous of the baby. Analysis of whether these young people were more likely to have felt like shaking their baby brother/sister was not carried out because of the small numbers involved.

The students were asked where they had learnt about the dangers of shaking babies. As Table 6 shows, the findings reinforce the importance of parents knowing the full risks of shaking and suggest that a national television advertising campaign would be a way of informing many teenage children of the dangers of shaking a baby in their care.

Table 6 Source of school students' knowledge about the dangers of shaking babies

Source of knowledge	Percentage	<i>n</i>
Common sense	44	53
Television	36	43
Parents	33	40
Family/friends	23	28
Leaflets	14	17
Teachers	10	12
Books	7	9

N = 152

Discussion

These data identify a largely hidden issue. The sample of women was broadly representative of women living in Newham and the calculations which follow can be made with some certainty about their accuracy. Since around 9,000 women in Newham will have a baby under the age of two⁵ our findings suggest that, at any given time, just under 1,000 women in the borough will have shaken their baby and just over 2,000 will have felt like shaking their baby. Furthermore this estimate is bound to

⁵ This is an estimate based on statistics which show that 4,554 babies were born in Newham in 1992 (East London and The City Health Authority, 1995).

be an underestimate and, when the actions of male carers and young people are included, the figures could be significantly higher. The size of the problem alone suggests that long-term preventative efforts, rather than a campaign which would typically be time-limited, might be more appropriate.

The research findings justify the introduction of a preventative programme in other ways too. The fact that babies cannot themselves 'disclose', that head injuries from shaking are invisible and diagnosis generally difficult, and that babies can suffer permanent brain damage—which means that reacting to the problem once it has occurred is too late—all reinforce the arguments in support of a prevention programme. So, too, does the finding in American studies that shaking is often considered an 'acceptable' form of violence. Moreover, the preventative potential of raising the awareness of the dangers of shaking babies is clearly shown by the finding that the more aware women were of the dangers of shaking, the less likely they were to have shaken their baby. Moreover, the research process itself further raised awareness of the dangers of shaking. When interviewees were not fully aware of the injuries that can be caused by shaking, researchers explained what could happen. Feedback from parent and toddler groups showed that the interviews sparked off some discussion and debate between mothers in the groups which raised awareness for those women who were not interviewed.

In a political climate where the demand, and the need, for services are greater than the resources available, and where workloads of service providers are ever-increasing, targeting particular groups of women for a preventative campaign might be seen as an attractive option. Our findings would not support such targeting and, indeed, challenge some of the popular stereotyping about which type of women are more competent and able to cope than others. Experience suggests that the type of women who may be targeted are likely to be young single parents and women whose pregnancies were unplanned. Whilst less than a third of the women in our study were single parents, the findings suggest that female single parents were no more likely to shake their babies than women in two-parent families. In fact women in traditional families with a partner or husband in full-time work were likely to have less support and to feel more isolated and stressed by their experiences of caring for babies and young children. Similarly, older women were just as likely to have felt like shaking as young mothers, suggesting that maturity does not make motherhood less stressful. As far as women with unplanned pregnancies are concerned, our findings have shown that it was in fact women with planned pregnancies who were more likely to have felt like shaking/have shaken their baby than women with unplanned pregnancies. Many women with planned pregnancies had expected parenting to come naturally and had been surprised by the difficulties involved.

In addition to recognizing that women who enter motherhood out of choice and with enthusiasm may be a higher risk group than those who did not plan their pregnancy, this finding may also have implications for what advice and support is offered to mothers. It may be, for example, that support which portrays parenting as 'natural' and advises women to 'follow their instincts', may actually undermine many women's feelings of competency and adequacy and miss particular knowledge which women could usefully learn.

Thus, our data suggests that all mothers and women carers should be targeted for an awareness-raising programme as well as male carers and young people. The findings also suggest that an awareness-raising programme on its own would be insufficient to prevent the problem.⁶ In particular, our findings highlight the important role health professionals can play in advising carers about a baby's persistent crying which can be a contributory factor to, or an indicator of, a stressed relationship between the mother and baby (Miller *et al.*, 1993) and may further negatively affect the parent-child relationship (Downey and Bidder, 1990). Research findings show that this relationship can be improved through such services as the telephone counselling service, CRY-SIS, which resulted in less crying (Wolke *et al.*, 1994) and mothers' discussion groups and parent education groups (Telleen *et al.*, 1989). A persistently crying baby can also affect other relationships within a household and assistance may be advisable for these people as well.

Other contributory factors can also be addressed as part of a prevention strategy. Practical actions can be taken; for example, ensuring that pregnant women are not housed in temporary accommodation in an unfamiliar area away from existing support networks, the provision of neighbourhood carers' and toddlers' groups, and readily available and free quality financial and housing advice, would all assist.

Finally, whilst this research has focused predominantly on the experiences of mothers, prevention strategies also need to be aimed at paid child-carers, as the recent court cases of Helen Stacey and Louise Woodward highlight, and at men who, as the literature shows, are most likely to be perpetrators in cases involving severe injury and death (Showers, 1992; Showers *et al.*, 1995; Starling *et al.*, 1995).

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⁶ Following preliminary findings from our research, Newham's ACPC developed an awareness-raising campaign which consisted of posters and leaflets (with an insert in various community languages) designed by an advertising agency and distributed to a wide range of health, community and education settings throughout the borough. The leaflet explained what can happen when a baby is shaken, gave advice on how to calm a baby and provided a list of local and national helplines and organizations to contact for advice/support. That was a short-term strategy, and we are not aware of what has followed, except that a longer term strategy was planned.

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