

## Prevalence of domestic violence when midwives routinely enquire in pregnancy

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**Objective** To assess the prevalence of domestic violence in pregnancy when midwives are trained to enquire about it routinely.

**Design** A cross sectional study during a period after midwives had been trained to routinely enquire about it and a retrospective case note survey at an earlier period.

**Setting** The maternity services of Guy's and St Thomas' NHS Hospital Trust in South London.

**Sample** Women aged 16 and over booking for maternity care between 14th September 1998 and 21st January 1999.

**Methods** Midwives were required to routinely enquire about domestic violence at booking, 34 weeks of gestation and postpartum (within 10 days) using a series of structured questions.

**Main outcome measures** The lifetime and annual rates of domestic violence. The prevalence of domestic violence in pregnancy.

**Results** The prevalence of domestic violence in pregnancy was 1.8% at booking, 5.8% at 34 weeks of gestation and 5.0% at 10 days postpartum. Eight hundred and ninety-two women were asked about domestic violence on at least one occasion, of whom 22 (2.5%) reported domestic violence in pregnancy. Two hundred and sixty-five maternity notes were reviewed for the retrospective case note survey and one (0.37%) case of domestic violence in pregnancy was identified. Routine questioning increased the rate of detection of domestic violence by 2.1% (95% CI = 0.1–3.4%;  $P = 0.03$ ). The lifetime prevalence of domestic violence was 13%, and 6.4% in the previous 12 months.

**Conclusions** Routine enquiry for domestic violence can increase the rate of detection in maternity settings, thereby providing an opportunity for women to access help early.

### INTRODUCTION

Domestic violence has been defined as physical, sexual or emotional abuse by an adult perpetrator directed towards an adult victim in the context of a close relationship. Most often, violence is perpetrated by a man towards his current or former partner.<sup>1</sup> Domestic violence is increasingly recognised as an important public health issue resulting in significant physical, psychological and social impairment.<sup>1</sup> Guidelines published by the Department of Health advocate the training and education of all health professionals and the use of routine screening to identify cases.<sup>2</sup>

Rates of violence during pregnancy perpetrated by a partner range from 3.4%<sup>3</sup> to 33.7%.<sup>4</sup> Higher rates have been elicited in response to direct questioning by trained

health professionals and repeated questioning.<sup>5</sup> Women appear to be at greater risk postpartum<sup>6,7</sup> and one study has found higher rates of violence among pregnant teenagers.<sup>8</sup>

Domestic violence can have an adverse effect on the health of the pregnant mother and her child both before and after birth. Some studies have found an association between domestic violence and low birthweight,<sup>9,10</sup> miscarriage,<sup>11</sup> and premature labour.<sup>12</sup> In the 1997–1999 CEMD, 80% of women under the age of 18 had experienced some form of abuse at home and 12% of women had disclosed domestic violence to a health professional during their pregnancy.<sup>13</sup>

The failure of health professionals to identify domestic violence and offer appropriate support is a significant problem.<sup>14</sup> Most women who leave an abusive relationship have requested medical assistance at some point.<sup>15</sup> Pregnancy provides many potential opportunities to identify and help women experiencing domestic violence because of their frequent contact with doctors and midwives. Studies conducted outside the UK have shown that repeated enquiry using structured questions in pregnancy significantly increases the rate of detection of domestic violence.<sup>5,16,17</sup>

There is only one other UK study on domestic violence in pregnancy which reported a prevalence of 3.4%.<sup>3</sup> There are a number of methods that can be used to measure the

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**Table 1.** Questionnaires returned at each interview phase. Values are given as *n* (%). *N* = 892 women were asked about domestic violence on at least one occasion.

	Booking	34 weeks	Postnatal (within 10 days)
Agreed to participate	771 (70)	86 (97)	140 (43)
Declined to take part	120 (11)	0 (0)	4 (1)
Inclusion criteria* could not be met	214 (19)	3 (3)	185 (56)
Total	1105	89	329

\* Private consulting time with the woman, use of a female professional interpreter, private environment.

prevalence, including anonymous questionnaires,<sup>18</sup> computer assisted interviewing<sup>15</sup> and interviews administered by researchers.<sup>19</sup> There have been few studies exploring the practical difficulties that midwives and obstetricians may encounter in identifying domestic violence.<sup>20</sup> The aim of this study was to examine the prevalence of domestic violence in pregnancy when trained midwives routinely enquire using structured questions.

## METHODS

This study formed part of an Economic and Social Research Council study on the prevalence of domestic violence in pregnancy and the impact of domestic violence on maternal health and obstetric outcome. Full details of the methodology are described by Bacchus *et al.*<sup>21</sup>

Women aged 16 and over booking for maternity care at Guy's and St Thomas' NHS Hospital Trust, between 14th September 1998 and 21st January 1999, were asked about domestic violence at booking, 34 weeks and within 10 days postpartum. Women were only asked about domestic violence if the midwife was able to see the woman alone and only young children who were not of comprehending age could be present during the interview. Female professional interpreters were used for women needing a translator. One hundred and sixteen (80%) midwives received training on domestic violence, how to routinely enquire about domestic violence and appropriate responses to disclosure of abuse.

Domestic violence was assessed using a variation of the Abuse Assessment Screen.<sup>22</sup> It was defined as any adult experience of physical or sexual violence perpetrated by a

current or former partner or member of the family. Women were given a response card which contained the following: current partner or husband, ex-partner or husband, family member or relative, other (specify), and no one. In relation to the previous 12 months, women were asked: 'Have you felt unsafe or afraid?', 'Have you been threatened with violence?', 'Have you been physically hurt?', 'Have you been physically hurt since becoming pregnant?', 'Have you been made to engage in any sexual activity when you didn't want to?'. Frequency of physical violence and sexual violence in the previous 12 months and during pregnancy was categorised into once, twice or 'more than twice'. Injuries sustained during pregnancy were classified as: no lasting injuries or pain; resulted in persistent pain; bruises or cuts only; broken bones, teeth, burns, severe wounds and/or hospital treatment; permanent disfigurement or disability; use of a weapon or object as a weapon; and made to have sex or perform sex acts without you wanting to. A body map picture was used to identify location of injuries. Women were also asked whether they had experienced physical violence *before* the previous 12 months. Questions on physical and sexual violence experienced in the postpartum period were included in the final phase. Each interview took approximately 5 minutes, although more time was required for women who disclosed domestic violence. The questionnaire was pilot tested with a community team for one month. All women introduced to the study were offered information about community resources. The study received ethical approval by St Thomas' Hospital Research Ethics Committee.

A retrospective survey of maternity notes was conducted to compare the prevalence of domestic violence among women attending for maternity care at Guy's Hospital during a similar four-month interval two years prior to the study. At this time, midwives had not received training in the recognition of domestic violence, nor were they required to ask routinely about it. The sample was achieved by selecting every third case from a complete list containing only the surnames and hospital numbers of women booking at Guy's Hospital between September 1995 and January 1996. The maternity notes were classified as *definite domestic violence*, where it was clearly recorded in the notes that a partner or member of the family had physically abused or injured the woman. Records were classified as *probable domestic violence*, in cases of unexplained injuries, or where the nature and pattern of the

**Table 2.** Conditions of interview. Values are presented as *n/n* (%).

	Booking	34 weeks	Postpartum
Woman accompanied to appointment/woman not alone at home	311/1092 (29)	12/89 (14)	190/329 (58)
Woman was seen alone	117/311 (37)	7/12 (58)	9/190 (4.7)
Interview conducted with young child present	16/311 (5.1)	2/12 (17)	1/190 (0.5)
Professional interpreter required	88/1092 (8.1)	2/89 (2.2)	20/329 (6.1)
Professional interpreter was present	22/88 (25)	1/89 (1.1)	0/20 (0.0)
Conversation could be overheard	101/1098 (9.2)	1/89 (1.1)	171/329 (5.2)

injuries described were incompatible with explanations given, and were consistent with experiences of domestic violence. Where domestic violence was not recorded and there were no injuries, complaints or symptoms consistent with experiences of domestic violence, records were coded as being *absent* for domestic violence.

Frequencies and descriptive statistics with confidence intervals were used to calculate the prevalence of domestic violence. The relative risk of women reporting domestic violence in the current pregnancy if they also reported this violence before the previous 12 months is reported.

## RESULTS

During the four-month recruitment phase, 1561 women booked for maternity care and questionnaires were returned for 1105 (71%). Nothing is known about the eligibility of the 456 (29%) for whom questionnaires were not returned (see Table 1). Eight hundred and ninety-two women were asked about domestic violence on at least one occasion, of whom 67 (7.5%) were asked twice and 19 (2.1%) three times. The circumstances of the interviews are presented in Table 2.

The prevalence of domestic violence is shown in Table 3 and the type, frequency and perpetrator of violence experienced in the previous 12 months and in pregnancy is presented in Table 4. Of the 57 women who reported domestic violence in the previous 12 months, 34 (60%) also reported violence before this time. The relative risk of women experiencing domestic violence in the current pregnancy, if they had also experienced domestic violence at any time before the previous 12 months, was 10 (95% CI = 4.5–23;  $P < 0.05$ ). Twelve (13%) of the 94 women who reported domestic violence before the previous 12 months also reported domestic violence in the current pregnancy. Ten (1.3%) of the 798 women who did not report domestic violence before the previous 12 months also reported domestic violence during the current pregnancy. Of the 892 women interviewed on at least one occasion, 69 (7.7%, 95% CI = 6.2–9.7%) reported feeling

**Table 4.** Type, frequency and perpetrator of domestic violence in the previous 12 months and pregnancy. Values are presented as  $n$  (%).

<b>Type of violence in the previous 12 months (%), <math>n = 57</math></b>	
Physical violence only	43 (75)
Sexual violence only	7 (12)
Physical and sexual violence	7 (12)
<b>Perpetrator of domestic violence in the previous 12 months (%), <math>n = 57</math></b>	
Current or former partner/husband	52 (91)
Family member	4 (7.0)
Partner and family member	1 (1.8)
<b>Frequency of physical violence in the previous 12 months (%), <math>n = 44</math></b>	
1 episode	15 (34)
2 episodes	5 (11)
> 2 episodes	24 (54)
<b>Frequency of sexual violence in the previous 12 months (%), <math>n = 11</math></b>	
1 episode	1 (9.1)
2 episodes	1 (9.1)
>2 episodes	9 (82)
<b>Frequency of domestic violence in pregnancy (%), <math>n = 19</math></b>	
1 episode	11 (58)
2 episodes	3 (16)
>2 episodes	5 (26)
<b>Site of injury during pregnancy (%),* <math>n = 19</math></b>	
Face	10 (52)
Abdomen	7 (37)
Head	5 (26)
Back	4 (21)
Breasts	3 (16)
Neck	1 (5.3)
Legs/arms/extremities	7 (37)
<b>Type of injury during pregnancy (%),* <math>n = 21</math></b>	
No lasting pain or injury	5 (24)
Persistent pain	4 (19)
Cuts and/or bruises	9 (43)
Broken bones or teeth, burns or severe wounds requiring hospital treatment	4 (19)
Permanent disfigurement	1 (5.3)
Use of a weapon	1 (5.3)
Forced sex	2 (11)

\* Percentages do not add to 100 as multiple responses were recorded.

**Table 3.** Prevalence of domestic violence at each phase and in overall sample. Values are given as  $n$  (%). Some women were asked about domestic violence more than once. Domestic violence is defined as any adult experience of physical and/or sexual violence by a current or former partner or family member.

	Booking ( $N = 771$ )	34 weeks ( $N = 86$ )	Postnatal ( $N = 140$ )	Total no. women asked at least once ( $N = 892$ )
<b>Lifetime</b>	103 (13)	17 (9.8)	16 (11)	22 (13)
95% CI	11–16	13–29	7.2–18	12–16
<b>Previous 12 months</b>	46 (6.0)	5 (5.8)	10 (7.1)	57 (6.4)
95% CI	4.5–7.9	2.5–13	3.9–12.6	5.0–8.2
<b>Current pregnancy</b>	14 (1.8)	5 (5.8)	7 (5.0)	22 (2.5)
95% CI	1.1–3.0	2.5–13	2.4–10	1.5–3.7

unsafe or afraid and 70 (7.8%, 95% CI = 6.3–9.8%) being threatened with violence in the previous 12 months by a partner or family member.

Two hundred and sixty-five out of 895 (30%) maternity records from 14th September 1995 to 21st January 1996 were inspected. One case of 'definite domestic violence' was identified in which a midwife had documented that the woman had been admitted to casualty following a blow to the abdomen inflicted by a partner. No cases of 'probable domestic violence' were identified. The use of routine enquiry by midwives increased the detection rate of domestic violence in pregnancy by 2.1% (95% CI = 0.1–3.4%;  $P = 0.03$ ). A *post hoc* power calculation indicates that at the 0.05 level of significance, the study has 80% power to detect a difference of 2% given a sample size of 265 in the retrospective case note survey and a sample three times this size in the routine enquiry study (892).

## DISCUSSION

Women's vulnerability to experiencing violent physical or sexual assault from a partner during pregnancy would appear to be an under-estimated and under-recognised problem. This study found an overall prevalence of 2.5% domestic violence occurring during the current pregnancy, which is lower than a number of non-UK studies<sup>4,6</sup> but similar to that found in another UK study using an anonymous, self-completion questionnaire at the booking appointment (3.4%).<sup>3</sup> Even if similar questions are used, other factors including the training, sensitivity, individual skill of the interviewer, timing of the questions and the woman's willingness to discuss abuse are also known to affect the rate of disclosure.<sup>20,21</sup> The majority of women in this study were asked about domestic violence at the booking appointment. This would not have allowed for the detection of violence that began later during pregnancy. Studies reporting higher rates of violence during pregnancy enquired during the third trimester, thereby allowing for an estimate of violence during the entire pregnancy.<sup>5</sup> In addition, women who experienced threats of violence or emotional abuse only are not included in the reported prevalence. Nevertheless, the rate of 2.5% would correspond to at least 150 women annually experiencing domestic violence during pregnancy, out of 6000 women booking for maternity care at Guy's and St Thomas' Hospitals. This is highly significant when taking into account the time and resources that need to be allocated to women who experience obstetric complications as a result of domestic violence. Repeat admissions to the antenatal ward where bed space is scarce, the use of expensive scanning equipment and consultations all increase costs in time and money.

The 34-week phase produced the highest rate of disclosure of domestic violence in pregnancy (5.8%),

although caution should be exercised in interpreting this figure, given the low numbers of women participating at this time, which could have produced a selection bias. Another factor to consider when interpreting the results is the number of women who were excluded from the study at each stage because the inclusion criteria of confidential time with the midwife, a private environment and the use of female professional interpreters were not obtained. The prevalence of domestic violence among these women, as well as those who declined to take part, is unknown. Only one case of domestic violence experienced during the postpartum period was identified, much lower than in a number of other studies,<sup>6,7</sup> possibly as this took place very soon after delivery and represented a very short period at risk. The drop in the rate of routine enquiry by midwives reflects some of the difficulties associated with this and are discussed in a separate paper.<sup>20</sup>

In about one-third of the women (36.8%) who reported domestic violence in the previous 12 months, the violence started during pregnancy. Women who had experienced domestic violence at any time before the previous 12 months were at increased risk of domestic violence during the current pregnancy. This suggests that women who have experienced domestic violence in the past are vulnerable to domestic violence in the future, a finding that has been noted in other research.<sup>23</sup>

This study also agrees with previous research that the introduction of screening questions significantly increases the rate of detection of domestic violence. This suggests that, unless women are directly asked about domestic violence by health professionals, they do not disclose it.<sup>24</sup> The limitation of using a historical comparison group for the purposes of assessing prevalence in the past is that there is no means of identifying those cases where domestic violence was disclosed to the midwife, but was not recorded in the maternity notes. However, it has been demonstrated that health professionals are reluctant to enquire directly about domestic violence in the absence of training and protocols<sup>14,24</sup> and that women are often too afraid or embarrassed to volunteer such information in the absence of specific questioning.<sup>21,24</sup> We therefore consider it unlikely that cases of domestic violence were being identified by midwives at a higher or even similar rate before the screening study, without there having been any training or policies advocating routine questioning at the time. In addition, the method of retrospectively surveying case notes has been used by other researchers to examine the effect of introducing screening questions to detect domestic violence in health settings.<sup>24,25</sup>

Domestic violence poses a risk to the health of the mother and her baby both during pregnancy and after childbirth.<sup>26</sup> Pregnancy provides an opportunity for health professionals to raise awareness about the prevalent nature of domestic violence and its harmful effects, and to offer women appropriate advice and information about support

services and safety planning. A disclosure of domestic violence in pregnancy should be regarded as a risk factor, which, as with diabetes or hypertension, requires additional monitoring and vigilance.

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