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Randomised controlled trial of community debriefing following operative delivery

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Objective The aim of this study was to determine if two debriefing sessions following an operative delivery could reduce a woman's fear of future childbirth.

Design Prospective randomised controlled trial (RCT) with two arms comparing debriefing, aimed to reduce fear of future childbirth, with standard care after birth.

Setting District General Hospital with 2500 deliveries per year.

Sample Three hundred and nineteen mothers who delivered a first child by operative delivery (i.e. forceps, vacuum or emergency caesarean section). The study took place at Huddersfield Royal Infirmary, from January 2002 to July 2003.

Methods Debriefing by community midwives specifically trained in postpartum debriefing at 10 days and 10 weeks.

Main outcome measure Fear of childbirth was assessed using the Wijma Delivery Expectancy Scale (WDEQ). WDEQ scores were measured 10 days, 10 weeks and 20 weeks following delivery.

Results Fear of childbirth as measured by the WDEQ was lower throughout the study for the debriefing group. However, it never reached statistical significance in the short term [10 days debriefing = 94.5, control = 97.5 ($P = 0.295$), 10 weeks debriefing = 92.0, control = 97.9 ($P = 0.076$), 20 weeks debriefing = 90.9, control = 97.4 ($P = 0.057$)].

Conclusion This study shows in the short term there was no significant difference in the WDEQ fear of childbirth scores. The debriefing group were showing a tendency for lower scores. Long term follow up of these cases may be more relevant.

INTRODUCTION

To most people the process of childbirth should be a natural life event. However, over the last 30 years the proportion of normal deliveries has declined, mainly because of the increase in caesarean sections. The long term psychological morbidity associated with assisted childbirth remains a largely unrecognised problem. In particular, women who deliver their first baby by caesarean section, forceps or vacuum are more likely to be frightened about future childbirth than women who have had a normal delivery.[1] Women who have their first child by caesarean section also have fewer further children than women who have normal deliveries.[1–3] Following our initial observation study,[1] we were concerned about the number of mothers who were frightened about future childbirth. It was felt that two debriefing sessions might help to reduce fear of future childbirth associated with operative delivery.

Psychological morbidity following an operative delivery includes depression, guilt, regret, loss of self-esteem, prolonged pain, discomfort, grief reactions, feelings of violation, dissatisfaction with care and hostility to hospital staff.[4–6] In the long term this morbidity may progress to chronic conditions such as depression, voluntary infertility and also lead to marital problems.[7] Operative delivery cannot normally be avoided, although there may be opportunities to prevent the connected morbidity.

Three randomised controlled trials (RCT) of one debriefing for women while on the postnatal ward have been reported. The first RCT reported reduced anxiety and depression three weeks following debriefing.[8] The second RCT reported no difference in maternal depression and social health status after six months in 1041 women compared with controls following an operative delivery.[9] The third study, which measured maternal depression and general health, found that there was no difference between women who were debriefed and the control groups.[10] It has been suggested that an exposure that is too brief, such as debriefing on the postnatal ward, may exacerbate, rather than ameliorate, distress.[11] It is proposed that it is necessary to provide debriefing that is available over a number of months in order to have beneficial effects on postpartum psychological morbidity.

The aim of this study was to determine if two debriefing sessions following an operative delivery could reduce a woman's fear of future childbirth.

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This is the first RCT to examine the effects of debriefing carried out by trained community midwives in the women's own homes. Structured debriefing was undertaken twice: first at 10 days and then at 10 weeks postdelivery. Each midwife followed a critical incidence stress debriefing protocol.[12] The protocol allowed women to go through any events surrounding the birth and the midwife provided techniques for the women to reduce their anxiety levels. The study was restricted to first time mothers to control for previous experiences.

METHODOLOGY

This was a prospective RCT with two arms comparing debriefing methods after birth aimed to reduce fear of future childbirth. The study took place at Huddersfield Royal Infirmary, from January 2002 to July 2003. We recruited mothers who delivered a first child by operative delivery (i.e. forceps, vacuum or emergency caesarean section). Emergency caesarean section included all women who expected to have a vaginal delivery. We excluded women who were not able to speak and read English, had experienced a stillbirth, had a neonatal death, ill on intensive care or the baby was in a critical condition on SCBU. Ethical approval was granted from the local ethics committee.

Women were randomly allocated to control or debriefing group while in hospital following the birth using sealed envelopes containing the treatment group:

Control group—standard postpartum care, plus 'normal' debriefing over a 10-day period. Normal debriefing includes the doctor at delivery giving information and answering questions and the community midwife asking about the birth on her first visit.

Debriefing group—standard postpartum care and debriefing in their own homes by community midwives specifically trained in postpartum debriefing at 10 days and 10 weeks. The debriefing involved six phases, introductory, fact finding, feelings, symptoms, teaching and validation, and a re-entry phase for unanswered questions and an action plan. Access to psychological services was available if required.

All community midwives in Huddersfield attended training by a consultant clinical psychologist in critical incident stress debriefing. The training lasted 3 hours and covered, coping with crises, effects of trauma and critical incident stress debriefing. As debriefing was a new skill, a questionnaire was sent to the community midwives to assess the training and their experiences of debriefing.

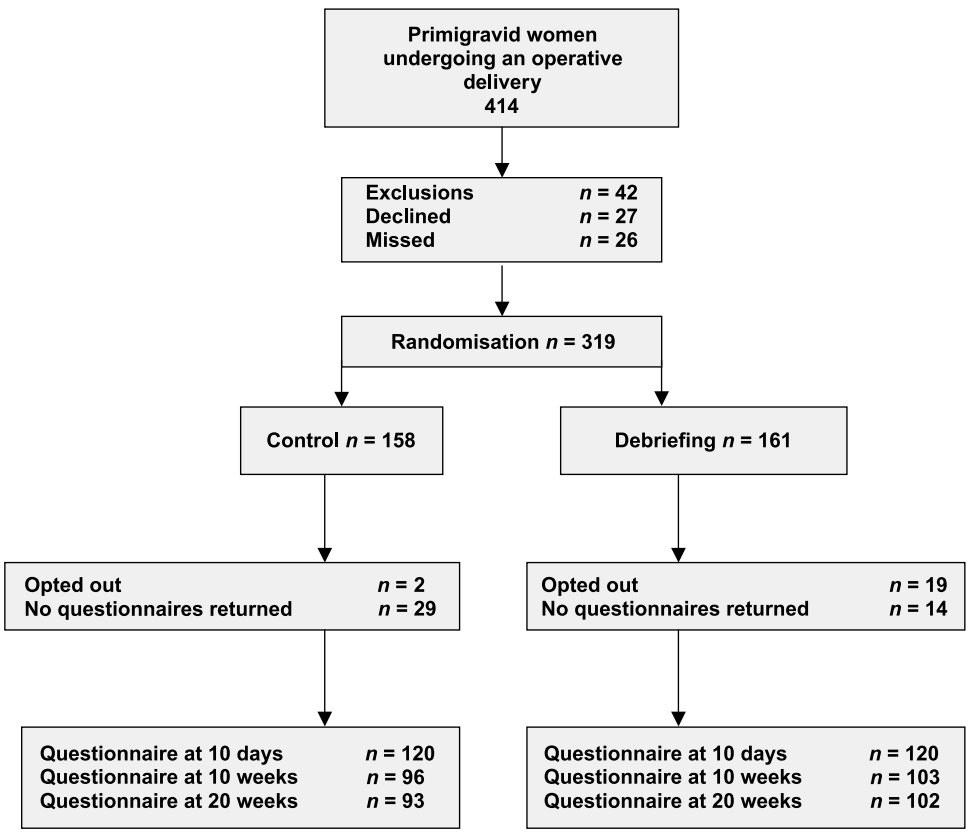

Fig. 1. Recruitment and participation.

The first null hypothesis was that debriefing after operative birth made no difference to changes of mothers' fear of childbirth when compared with controls.

The second null hypothesis was that debriefing after operative birth made no difference to changes of mothers' post-traumatic stress when compared with controls.

Fear of childbirth was assessed using the previously validated Wijma Delivery Expectancy Scale (WDEQ; shortened version).[13] The WDEQ is a 33-item questionnaire using a six-point Likert scale. For the purpose of this study the questionnaire was shortened to 30 questions, as questions on 'what happened when labour was most intense' would not be applicable to some women following caesarean section. The continued validity of the WDEQ was assured by checking with Professor Wijma. The Impact of Event Scale (IES)[14] was used to measure emotional distress relating to labour and delivery. The IES was used as a secondary measure of the psychological affects of childbirth. The IES is a 15-item questionnaire with two subscales: seven items measure intrusive thoughts and eight items measure avoidance. The IES was adapted in this study for use following childbirth by replacing the word 'it' with either 'birth' or 'childbirth'. In addition, women were asked for further comments.

Members of both control and debriefing groups were asked to complete the WDEQ and IES at 10 days, 10 weeks and 20 weeks postpartum. In the case of the debriefing group, they were asked to complete their questionnaires prior to each debriefing session.

Women had the option of withdrawing from the study at any time. Data were collected from women who did not take part in the study to allow comparison with those who took part.

To obtain the desired power of 0.8 (significance level 5%), and 15% difference in mean scores between debriefing and control group at 10 weeks of clinical significance, a sample size of 80 was required in each group as approved by local ethics.

An information sheet about the study was given to women postnatally and discussed with a midwife. Recruitment took place on the postnatal ward, where written consent was obtained and then randomisation occurred. Women were randomly allocated to control or debriefing on a 1:1 basis using envelopes containing the treatment group. Neither the community midwives nor the women were blinded to which group they were in.

Data were analysed using the Statistical Package for Social Scientists (SPSS 12.0.1, Apache Software Foundation, USA). Statistical significance was defined as $P < 0.05$, with 95% confidence intervals. The data analysed were confined to the following:

1. A descriptive account of the socio-demographic characteristics of the sample, including details of women who did not take part in the study.
2. Differences in the total WDEQ scores between the control and debriefing groups using two-tailed independent t test for normally distributed variables.
3. Differences in the total IES s scores, avoidance and intrusion scores between the control and debriefing groups using a Mann–Whitney U test for data that are not normally distributed.

RESULTS

Three hundred and nineteen women were recruited to the trial, giving a recruitment rate of 78%, see Fig. 1. Women were excluded either because the mother could not speak English ($n = 32$), was too ill on intensive care ($n = 5$) or the baby was in a critical condition ($n = 5$). We calculated a 50% loss to follow up and therefore recruited 320 women with ethical approval.

Table 1 shows women in the control and debriefing groups were similar in terms of age, ethnic origin, employment and

Table 1. Demographic information about the study sample.

	Number in control	Number in debriefing
Age		
<20	8	8
20–24	27	29
25–29	49	44
30–34	51	52
35–39	18	25
>40	3	2
Ethnic origin		
White	132	138
Indian/Pakistan	17	8
Chinese	0	3
Black African	1	2
Black Caribbean	5	7
Other	2	1
Marital status		
Married	94	98
Single	13	15
Lives with partner	50	46
Employment		
Both working	127	128
Both unemployed	4	0
One working	16	16
Students	1	1
Single employed	4	3
Single unemployed	4	8
Unknown	1	3
Mode of delivery		
Emergency section	79	85
Forceps	15	19
Vacuum	48	45
Vacuum/forceps	10	10
Vacuum/forceps/emergency section	4	0
Forceps/emergency section	1	0
General anaesthetic	15	17

Table 2. The *t* test fear of childbirth (statistical significance $P < 0.05$).

	10 Days			10 Weeks			20 Weeks		
		Control	Debriefing		Control	Debriefing		Control	Debriefing
WDEQ									
N		120	120		96	103		93	102
Mean		97.5	94.5		97.9	92		97.4	90.9
P (95% CI)	0.295			0.076			0.057		
Lower	−2.62			−0.63			−0.19		
Upper	8.58			12.4			13.2		
IES									
N		121	118		95	100		93	102
Mean		20.19	16.9		15.97	12.72	0.29	11.19	10.66
P	0.27			0.09					

mode of delivery. Women who did not return questionnaires were younger (mean age 25.5 years) compared with women who returned questionnaires (mean age 30.0). Women who did not return questionnaires were more likely to be single 13/32. None of the Afro-Caribbean women returned a complete set of questionnaires.

Analysis was on an intention-to-treat basis. Eighteen women in the debriefing group did not receive any debriefing, although eight of these women returned all three questionnaires. These women did not receive debriefing either because they did not feel their delivery was traumatic or the midwife felt teenagers should not be encouraged to have more children. Thirteen women did not receive their 10-week debriefing either because they did not want further debriefing or they could not be contacted: seven of these women returned an incomplete set of questionnaires.

Table 2 shows differences between the WDEQ scores, which demonstrated no significant difference. Women in the debriefing group had lower WDEQ and IES scores at each stage. This is likely to be due to community midwives starting the debriefing on the first postnatal visit at home.

An IES score >19 is said to be clinically significant. At 10 days and 10 weeks there were fewer women in the debriefing group with IES scores over 19 at 10 days (control $n = 48$, debriefing $n = 26$). However, Table 2 shows debriefing with the community midwife made no significant difference to the incidence of post-traumatic stress.

Sixty percent of midwives returned the questionnaire (16/27). Continuity of care, the training and quietness in the woman's home helped. Forty-three percent of the midwives ($n = 7$) felt debriefing benefits women following a traumatic delivery, a further 12% ($n = 2$) felt debriefing was beneficial to some women. Seventy-five percent of midwives ($n = 12$) felt comfortable doing debriefing. What prevented midwives from debriefing is shown Table 3. Midwives felt recruiting teenagers was inappropriate. When the midwives were not comfortable with the sessions it was either because they did debriefing on the first visit ($n = 1$) or they needed more training ($n = 2$).

Table 3. What prevented midwives from doing the debriefing.

Prevented midwives from doing debriefing	Number
Time	5
Women not wanting debriefing	6
Inappropriate referrals	2

One woman in the debriefing group was referred to the clinical psychologist as debriefing brought back memories of sexual abuse as a child. The community midwife felt it was inappropriate for her to continue in the study. One woman in the control group made comments that concerned the researchers. It was decided to offer this women an appointment the see her obstetrician after obtaining ethical approval.

Not all women gave comments (10 days 45%, 10 weeks 26% and 20 weeks 25%). Generally the experience of an operative delivery was a negative one, they realised it had to be done and their comments about staff were positive. Negative attitudes to delivery seem to lessen with time. Some women felt their partners were poorly informed and at times not treated with consideration. Women commented that their feelings changed throughout the process of labour to the point of delivery and it does not accommodate this change.

DISCUSSION

This study is the first RCT to examine debriefing carried out by trained community midwives for women following operative delivery. Fear of childbirth as measured by the WDEQ was lower throughout the study for the debriefing group. However, this never reached a significant difference in the short term.

Debriefing with the community midwife made no difference to the incidence of post-traumatic stress between the control and debriefing group, as there was no significant difference between IES scores at any stage. In both groups the number of women with clinically significant scores decreased over time. Acute psychological distress

after birth has been reported to not trigger long term distress in most parents.[15]

This study differed from previous studies[8–10] as the debriefing was held on two occasions and sessions were held at home. All the community midwives had received training in critical incident stress debriefing. In this study fear of childbirth and post-traumatic stress were measured rather than maternal depression and general health. It was decided not to measure maternal depression as research has suggested this is frequently associated with factors not related to childbirth.[16] Women were allowed sufficient time to debrief, sessions lasted up to an hour and a half.

The training was said to have prepared 66% of midwives ($n = 10$) for debriefing women. Two midwives said they needed more training. Feedback from the community midwives indicated that some of them started debriefing prior to the women completing the 10-day questionnaire, this is often done on the first visit. Debriefing prior to the 10-day questionnaire could explain why the mean WDEQ score was lower in the debriefing group than the control group at 10 days.

The study and the debriefing training raised awareness among the community midwives. It is probable that the community midwives used these skills for women, who they thought it would benefit, irrespective of which group the women had been randomised. If a woman in the control group expressed concern about her delivery when the community midwife was doing a routine postnatal home visit, the midwife would have used some of her debriefing skills to help. It became apparent during the study that it would be difficult to prevent the influence of the Hawthorne effect on the outcomes.

Women were keen to be involved in the study, only 27/414 women (7.8%) declined to take part. After randomisation, two women in the control group opted out compared with 19 in the debriefing group. Women usually opted out when the midwife was arranging a time to do the debriefing. However, more women in the control ($n = 29$) did not return any questionnaires compared with the debriefing group ($n = 14$). Non-return of questionnaires is likely to be a way of opting out. The midwives who recruited women to the trial felt talking to the women about the trial alerted them to women who would benefit from debriefing. The randomisation process was not compromised by this awareness as the group as a sealed envelope containing the group was opened following recruitment. Women who did not want debriefing were free to decline to take part in the study.

The analysis was performed on an intention-to-treat basis. Some women did not receive debriefing because they were visiting their babies on the special care baby unit (SCBU) ($n = 3$). Four teenagers did not receive any debriefing; some of the community midwives felt teenagers should not be debriefed. A few women did not want a second debriefing and others were lost to follow up. These factors are a source of potential bias. It is possible that the women who did not receive debriefing may have been particularly vulnerable (e.g. teenager or baby on SCBU) and may have benefited most from the debriefing.

It was anticipated that there would be a number of women lost to follow up. New mothers often move house to accommodate a growing family, are busy in their new role and by the time of the 10-week questionnaire some women would have returned to work. The total number of completed questionnaires at 10 and 20 weeks were similar in the debriefing and control groups. Women with additional stress (e.g. baby on SCBU, concealed pregnancy, mother ill) were less likely to return a complete set of questionnaires, 37% ($n = 17$) returned them all, while 55% ($n = 147$) of women with no additional stress returned all three questionnaires. Women who did not return questionnaires tended to be younger. A letter was sent with the questionnaires giving contact numbers if they had problems with the study. Reminders were sent to women who did not return questionnaires.

Of the eligible women (319/372) the recruitment rate was 86%. The women recruited into the study were similar in terms of age, marital status, employment and mode of delivery to those who declined to take part or were excluded. The 32/42 women of Indian/Pakistani were excluded because they were unable to speak or read English. The Asian women's mean scores for both control and debriefing groups were higher than the white population until 20 weeks when the Asian women in the debriefing group had lower mean scores [mean WDEQ 20 weeks white 90.9 ($n = 17$), Asian 85.3 ($n = 13$)]. We did not have sufficient funds to use interpreters to do debriefing with women who could not speak English. Also we could not be sure about the validity of the questionnaires once translated. None of the Afro-Caribbean women returned a complete set of questionnaire. Some of Afro-Caribbean women 4/12 returned one or two questionnaires; their scores were similar to the white women. The results are likely to be generalisable to other semi-urban English-speaking populations.

CONCLUSION

Women's fear of childbirth can affect their expectations, experience of delivery andalso plans for family size.[1] The findings of this study demonstrated in the short term no significant difference in the WDEQ fear of childbirth scores and IES emotional distress scores. These findings show community-led debriefing is not proven to be of any value in reducing women's fear of childbirth following an operative delivery.

The debriefing group were showing a tendency for lower scores. Long term follow up of these cases maybe more relevant. It is intended to follow up women in this study five years after delivery. A questionnaire is being developed to measure subsequent fertility and mode of delivery.

The study and the debriefing training raised awareness among the community midwives of other mothers who would benefit from debriefing. Midwives began making clinical

decisions on whether women not in the study would benefit from debriefing. The midwives did not feel debriefing would benefit all women. Seventy-five percent of the community midwives who responded to the midwives questionnaire felt comfortable doing the debriefing. Continuity of care and the training was said to help.

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