

Primary care

Randomised controlled trial of support from volunteer counsellors for mothers considering breast feeding

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Abstract

Objective To investigate whether offering volunteer support from counsellors in breast feeding would result in more women breast feeding.

Design Randomised controlled trial.

Setting 32 general practices in London and south Essex.

Participants 720 women considering breast feeding.

Main outcome measures Primary outcome was prevalence of any breast feeding at six weeks.

Secondary outcomes were the proportion of women giving any breast feeds, or bottle feeds at four months, duration of any breast feeding, time to introduction of bottle feeds, and satisfaction with breast feeding.

Results Offering support in breast feeding did not significantly increase the prevalence of any breast feeding to six weeks (65% (218/336) in the intervention group and 63% (213/336) in the control group; relative risk 1.02, 95% confidence interval 0.84 to 1.24). Survival analysis up to four months confirmed that neither duration of breast feeding nor time to introduction of formula feeds differed significantly between control and intervention groups. Not all women in the intervention group contacted counsellors postnatally, but 73% (123/179) of those who did rated them as very helpful. More women in the intervention group than in the control group said that their most helpful advice came from counsellors rather than from other sources.

Conclusions Women valued the support of a counsellor in breast feeding, but the intervention did not significantly increase breastfeeding rates, perhaps because some women did not ask for help.

Introduction

Breast feeding makes an important contribution to the health of mothers and babies, but in the United Kingdom only 69% of infants born in 2000 were initially breast fed.^{1,2} By four months, only 28% were still given any breast milk, even though most of the mothers would have preferred to continue.²

Several strategies have been used to promote breast feeding, such as setting standards for maternity services (for example, the joint World Health Organization and Unicef baby friendly hospital initiative), public education through media campaigns, and peer led initiatives to support individual

mothers.³⁻⁵ Voluntary organisations such as the National Childbirth Trust, Breastfeeding Network, and La Leche League have long played a part in supporting women. In 2000 they helped 8% of mothers in the United Kingdom.² We investigated whether offering voluntary support to all women considering breast feeding would increase the duration of any breast feeding, and their satisfaction with doing so.

Methods

Women were recruited during antenatal care at one of 32 general practices in London and south Essex. Recruitment was between April 1995 and August 1998. Inclusion criteria were considering breast feeding, and not having breast fed a previous child for six weeks (women who do are likely to breast feed again). We excluded those who had planned to contact a counsellor anyway, on ethical grounds; when it was potentially unsafe for home visits; and when women delivered before 36 weeks' gestation.

Women were randomised to counselling or to usual care. Overall, 28 accredited counsellors for the National Childbirth Trust took part. Their code of conduct emphasises the importance of a non-directive approach and strengthening mothers' confidence in their own abilities.⁶ The intervention, agreed with the counsellors and the National Childbirth Trust nationally, involved visiting the women once before birth and offering postnatal support by telephone or further home visits if requested. At the antenatal visit the counsellors gave the women a contact card and two leaflets published by the National Childbirth Trust and Health Education Authority.^{7,8}

We calculated that we would require 854 mother and infant pairs to detect a statistically significant increase from 50% to 60% ($\alpha = 0.05$, $\beta = 0.2$).⁹ After 300 women had been recruited, we noted that 60% of those followed to six weeks were breast feeding, therefore we needed to recruit 790 women to detect a 10% increase.



This is an abridged version; the full version is on bmj.com



Potential influences on results and supplementary data are on bmj.com

Outcome measures

The main outcome was the prevalence of any breast feeding at six weeks. Secondary outcomes included the proportion of women giving any breast feeds, or bottle feeds at four months, the duration of any breast feeding, and time to introduction of bottle feeds. At six weeks the women were asked about satisfaction with breast feeding (scored on a four or five point scale), problems encountered, and whether advice they received was helpful. Included in the postnatal questionnaires were open and closed questions from other studies.⁹⁻¹²

Results

Overall, 720 of the 2439 (30%) women who completed the antenatal questionnaire satisfied the inclusion criteria and were recruited (see bmj.com for flow of women through trial). Of these, 363 were allocated to receive additional support and 357 to receive usual care. These groups were generally similar (table 1).

In the intervention group, 320 (95%) women breast fed initially compared with 324 (96%) in the control group (table 2). At six weeks, 218 (65%) women in the intervention group and 213 (63%) in the control group were still giving some breast feeds. By four months, 143 (46%) of the 310 women who responded in the intervention group were breast feeding compared with 131 (42%) of the 310 women in the control group.

The duration of breast feeding was not significantly different between the women in the intervention and control groups (median 110 days *v* 96 days; $P = 0.445$). (Confidence intervals exceeded recording period.) Women in the intervention group were less likely to believe they were not making enough milk ($P = 0.038$), but on most measures there seemed to be no difference (see bmj.com).

At six weeks the 179 women in the intervention group who had tried to contact a counsellor postnatally were asked whether they found the counsellor helpful. Of the 169 respondents, 123 (73%) found her very helpful, 28 (17%) fairly helpful, 12 (7%) a little helpful, and six (4%) not helpful. Overall, 161 women made further comments in a free text section: most valued the relationship with their counsellor, learning more about breast feeding or practical suggestions for problems.

Discussion

Offering mothers additional voluntary support for breast feeding did not extend the duration of breast feeding or significantly delay the introduction of bottle feeds. Individually, women valued the support they received but their feeding behaviour as a group changed little.

We believe our study to be one of the largest randomised controlled evaluations of the effectiveness of volunteer counselling. The study was analysed on an intention to treat basis, including participants regardless of whether they made use of the support offered, in contrast to some earlier trials that have been criticised for methodological weaknesses.⁴ Most recent studies, despite more robust designs, have been conducted in settings where control groups received little support.^{3 13 14} Their results may be less applicable

therefore in countries such as the United Kingdom where women already receive routine postnatal care. Our findings, together with the more positive conclusions of the Cochrane review, suggest that although postnatal support may extend the duration of breast feeding, merely offering individual women yet more help has little further effect.⁴

Our findings should not be taken as an indicator of the effectiveness of counselling currently provided through the voluntary sector. Women who planned to contact a counsellor were specifically excluded because it seemed to us unethical to withhold support from those seeking it. Similarly, we set out to help women already considering breast feeding rather than to persuade those reluctant to do so, because this would have conflicted with the non-directive counselling

Table 1 Maternal characteristics and feeding intentions at recruitment during last trimester of pregnancy. Values are numbers (percentages)

Characteristic	Intervention group (n=363)	Control group (n=357)
Birth order:		
First child	269 (74)	270 (76)
Maternal age:		
<20	20 (5)	24 (7)
20-24	63 (18)	54 (15)
25-29	119 (33)	111 (31)
30-34	106 (29)	119 (34)
≥35	53 (15)	45 (13)
Ethnic group:		
White (United Kingdom)	212 (59)	205 (59)
White (other)	37 (10)	37 (11)
African or Caribbean	61 (17)	48 (14)
Indian subcontinent	24 (7)	31 (9)
Other	23 (6)	26 (7)
Social class*:		
I (professional and managerial)	38 (11)	31 (9)
II	81 (23)	98 (29)
III NM	68 (20)	56 (17)
III M	90 (26)	88 (26)
IV	40 (12)	36 (11)
V	7 (2)	15 (4)
Other	22 (6)	13 (4)
Age completed education:		
<16	25 (7)	26 (7)
16	86 (24)	88 (25)
17	51 (14)	52 (15)
18	50 (14)	59 (17)
≥19	142 (40)	124 (36)
Intention to return to work:		
None	85 (26)	91 (29)
Within six months	117 (36)	118 (38)
After six months	122 (38)	104 (33)
Feeding plan:		
Breast	240 (67)	244 (70)
Both breast and bottle	104 (29)	101 (29)
Undecided	16 (4)	6 (2)
Intended duration of breast feeding:		
<6 weeks	22 (7)	28 (8)
6 weeks-3 months	75 (23)	77 (23)
3-6 months	150 (45)	152 (45)
>6-9 months	51 (15)	36 (11)
>9-12 months	25 (8)	30 (9)
>1 year	8 (2)	15 (4)

Incomplete data reduced totals for all variables apart from birth order. Intended duration was not available for undecided women.

*Based on Registrar General's classification of households, using partner's occupation when woman had partner, and her own if not.

offered. These decisions focused the study on those who might be expected to welcome additional support but who would not otherwise receive it. It must also be emphasised that women who contacted a counsellor valued her advice more than that of a health professional.

Several factors may have operated to reduce apparent benefit from counselling (see bmj.com). Participating in the study may have affected the women's motivation, and we noted that 14% of those in the control group attempted to contact a counsellor. Despite efforts we recruited fewer participants than intended, although given the small differences observed and the high precision of the estimates it seems unlikely that the negative result can be explained by the reduction in statistical power. Although not all those women allocated to the intervention received support, our study probably reflects the reality of many health promotion initiatives. Counsellors had difficulty contacting a few women antenatally, but the much lower uptake of postnatal support seemed to reflect some women's reluctance to ask for help. Some counsellors commented that willingness to ask for help seemed related to motivation to breast feed. These observations have important implications for efforts to promote breast feeding. We need to address the factors in society that militate against breast feeding and organise postnatal care in ways that do not require women to identify themselves as having a problem, particularly in the first few days, when many women stop. This echoes the finding of the value of offering postnatal support as routine, rather than on demand.¹⁵

We were not able to explore other reasons why women did not seek help, but the counsellors suggested that some may have been unclear about what they could reasonably ask of a volunteer. Cultural barriers may have also made women from manual social class groups reluctant to contact them. The authors of one study have argued that because sociocultural influences are so important, opinion leaders need to work within, rather than across, cultural groups if they are to promote change in behaviour.¹⁶ Because of this, some have seen peer counsellors, recruited within the community, as agents to promote breast feeding.^{13 17 18} Much of the evidence to support this approach, however, comes from settings where statutory postnatal support is less developed.^{15 14 19}

What is already known on this topic

Many mothers in the United Kingdom have difficulty establishing breast feeding, and only 28% of babies are breast fed to four months

Although some mothers choose to consult volunteer counsellors for support, evidence that counselling should be more widely available is lacking

What this study adds

Offering additional support does not increase duration of breast feeding, perhaps because those who stopped were less likely to seek help

Those who asked for help rated it highly

It may be difficult to extend voluntary initiatives beyond the settings in which they arise

It is disappointing that the volunteer counsellors did not reap greater reward. Although women who made use of their support valued it highly and seemed more confident about their milk supply, others did not seek help. Ultimately the successful promotion of breast feeding requires change in attitudes throughout society. This calls for a sustained initiative that harnesses the potential of health services, employers, the media, and others to ensure that women and their partners feel well supported in breast feeding.²⁰

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Competing interests: AW acts in a voluntary role as a professional adviser to the National Childbirth Trust and other organisations engaged in breastfeeding support. JT is a member of the National Childbirth Trust.

Table 2 Prevalence of breast feeding at birth, six weeks, and four months

Type of feeding	Intervention group (n=336)	Control group (n=336)	Relative risk (95% CI)	P value*
Breast feeding				
Breast initially	320 (95)	324 (96)	0.99 (0.84 to 1.16)	0.44
Any breast:				
Six weeks	218 (65)	213 (63)	1.02 (0.84 to 1.24)	0.69
Four months	143† (46)	131† (42)	1.09 (0.86 to 1.39)	0.33
Exclusive breast at six weeks‡	103 (31)	86 (26)	1.20 (0.89 to 1.61)	0.15
Bottle feeding				
Any bottle:				
Seven days	116 (35)	128§ (38)	0.90 (0.70 to 1.17)	0.32
Six weeks	204 (61)	216 (64)	0.94 (0.78 to 1.15)	0.34
Four months	229† (74)	246† (79)	0.93 (0.77 to 1.12)	0.11

* χ^2 test.

†Based on 310 women.

‡Exclusive breast feeding implied that infants received no other liquids or solid foods as defined by WHO. Exclusive breastfeeding rates unavailable beyond six weeks because of incomplete data on introduction of solids.

§Based on 335 women.

Ethical approval: The study was approved by local research ethics committees, and all participants gave written informed consent.

- 1 Standing Committee on Nutrition of the British Paediatric Association. Is breastfeeding beneficial in the UK? *Arch Dis Child* 1994;71:376-80.
- 2 Hamlyn B, Brooker S, Oleinikova K, Wands S. *Infant feeding 2000*. London: Stationery Office, 2002.
- 3 Kramer MS, Chalmers B, Hodnett ED, Sevkovskaya Z, Dzikovich I, Shapiro S, et al. Promotion of Breastfeeding Intervention Trial (PROBIT). *JAMA* 2001;285:413-20.
- 4 Sikorski J, Renfrew MJ, Pindoria S, Wade A. Support for breastfeeding mothers. *Cochrane Library*, Issue 3. Oxford: Update Software, 2002.
- 5 Tedstone A, Dunce N, Aviles M, Shetty P, Daniels L. *Effectiveness of interventions to promote healthy feeding in infants under one year of age: a review*. London: Health Education Authority, 1998.
- 6 Breastfeeding Promotion Group. *Code of conduct for breastfeeding counsellors and trainees*. London: National Childbirth Trust, 1992.
- 7 National Childbirth Trust. *Breastfeeding: a good start*. London: NCT, 1990.
- 8 Health Education Authority. *Breastfeeding: your questions answered by the Health Education Authority*. London: HEA, 1992.
- 9 Grafty JP. Mothers' attitudes to and experience of breastfeeding: a primary care study. *Br J Gen Pract* 1992;42:61-4.
- 10 Jones DA, West RR. Effect of a lactation nurse on the success of breastfeeding: a randomised controlled trial. *J Epidemiol Community Health* 1986;40:45-9.
- 11 Rajan L. The contribution of professional support, information and consistent correct advice to successful breast feeding. *Midwifery* 1993;9:197-209.
- 12 Leff EW, Jefferis RN, Gagne MP. The development of the maternal breastfeeding evaluation scale. *J Hum Lact* 1994;10:105-11.
- 13 Morrow AL, Guerrero ML, Shults J, Calva JJ, Lutter C, Bravo J, et al. Efficacy of home-based peer counselling to promote exclusive breastfeeding: a randomised controlled trial. *Lancet* 1999;353:1226-331.
- 14 Haider R, Ashworth A, Kabir I, Huttly SRA. Effect of community-based peer counsellors on exclusive breastfeeding practices in Dhaka, Bangladesh: a randomised controlled trial. *Lancet* 2000;356:1643-7.
- 15 Houston MJ, Howie PW, Cook A, McNeilly AS. Do breastfeeding mothers get the home support they need? *Health Bull* 1981;39:166-72.
- 16 Bunton R, Murphy S, Bennett P. Theories of behavioural change and their use in health promotion: some neglected areas. *Health Educ Res* 1991;6:153-62.
- 17 McInnes RJ, Stone DH. The process of implementing a community-based peer breast-feeding support programme: the Glasgow experience. *Midwifery* 2001;17:65-73.
- 18 Dennis CL, Hodnett E, Gallop R, Chalmers B. The effect of peer support on breast-feeding duration among primiparous women: a randomized controlled trial. *Can Med Assoc J* 2002;166:21-8.
- 19 Barros FC, Halpern R, Victora CG, Teixeira ABM, Beria JU. A randomised intervention trial to increase breast-feeding prevalence in southern Brazil. *Rev Saude Publica* 1994;28:277-83.
- 20 World Health Organization Secretariat. *Infant and young child nutrition: global strategy on infant and young child feeding. Resolution WHA55/15*. Geneva: WHO, 2002. www.who.int/gb/EB_WHA/PDF/WHA55/ea5515.pdf (accessed 25 Sept 2003).

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A memorable conversation

Did my wife elope with someone else?

Mienwa, leader of the senior clerks clerking obstetrics and gynaecology, after watching Senegal triumph over France in their group opening match of the 2002 World Cup, reluctantly strolls back to the ward in an exuberant mood he just cannot conceal. Being the extrovert that he is makes it even more plain to all the staff on the ward.

"You cut [dodged] the ward round this morning just because you were watching football," comments the SIC (sister in charge), "You men are just too obsessed with that game."

"Oh yeah, I just couldn't miss seeing Diouf do his thing in this opener," retorts Mienwa, lifting his leg as though he were hitting a ball. "Who is the SHO on call tonight?"

"It's Dr Wange; he is in the evacuation room," answers sister.

In the evacuation room Mienwa finds Dr Wange alone, gazing fixedly through the window. "Good evening, Dr Wange. You seem unwell, mind sharing the problem?"

"Good evening, World Cup fanatic, it's good you've come by," replies (sarcastically) Dr Wange, reluctantly turning his gaze to Mienwa. "Let's say I have this problem that I have been contemplating to share with someone, and I had just 'tossed the die' in my mind that whosoever comes in here first will be that special counsellor to listen. Will you please take me up as your client?"

Still excited, Mienwa exaggerates the context, "You mean I am that lucky counsellor? OK, I am glad to exchange roles once more today. First, it was medical student for World Cup fanatic this morning, and now it's junior clerk for psychiatrist. So 'shoot,' what is the problem, client?"

"It's my wife, Mienwa, she has developed the typical triad of pre-eclampsia (hypertension, oedema, and proteinuria) suddenly in this, her fifth, pregnancy. Her previous obstetric history was normal, she is not a known hypertensive, and at least the ultrasound sonography taken at her last ANC visit revealed a normal pregnancy: you know what I mean—no multiple pregnancy or monster [hydatidiform mole] in utero.

"My neighbour whom I 'toss with the bottle' at the pub, hinted to me about someone 'eating from the same bowl' with me, but I shrugged it off. Now here I am, helplessly faced with this HELLP syndrome. Can you solve my puzzle, Mr Psychiatrist?"

"Damn, you got just the right professional to consult," Mienwa replies, "I deduce from your story that you are faced with what 'we' often label as the 'wise man's blues.' Being knowledgeable of the possible causes of your problem without clear cut proof to support your high index of suspicion for any particular one, you've probably been left nowhere else in this case but in the 'Othello syndrome.'"

"What a hell on earth is that, Mr Psychiatrist?"

"Relax, client. All I mean is this: here you are, scared (or I may say jealous) of the possibility that your wife cheated on you, and that it's possible you are not responsible for this last pregnancy—all because you know that change of sexual partners is one of the implicated predisposing factors to pre-eclampsia in later pregnancies in women without such a history during their first pregnancy. Mrs Naka [the consultant] told us a story of how the Baganda [a dominant Bantu tribe] men of long ago would detect pregnancies they were not responsible for when their wives developed eclampsia in later pregnancies. I reckon you've just receded back in time.

"Your high index of suspicion is sound, but selectively (your wife!) not scientifically reliable. I suggest you take her as the index case in a study you should initiate to test your suspicions. How about that?"

"Excellent. You've just given me an insight into a topic for my dissertation," says Dr Wange, while tapping on Mienwa's back. "Let's go to work. I think we have a hydatidiform mole to curette."

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This is a fictional account reconstructed from a conversation we held on a ward round with a senior house officer and consultant during my obstetrics and gynaecology clinical rotations. Its object is to convey humour and pathos. No real person is referred to.