Support for breastfeeding mothers (Review)

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TABLE OF CONTENTS

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ABSTRACT

Background
There is extensive evidence of the benefits of breastfeeding for infants and mothers. In 2003, the World Health Organization (WHO) recommended infants be fed exclusively on breast milk until six months of age. However, breastfeeding rates in many developed countries continue to be resistant to change.

Objectives
To assess the effectiveness of support for breastfeeding mothers.

Search strategy
We searched the Cochrane Pregnancy and Childbirth Group's Trials Register (January 2006), MEDLINE (1966 to November 2005), EMBASE (1974 to November 2005) and MIDIRS (1991 to September 2005).

Selection criteria
Randomised or quasi-randomised controlled trials comparing extra support for breastfeeding mothers with usual maternity care.

Data collection and analysis
Two authors independently assessed trial quality and extracted data.

Main results
We have included 34 trials (29,385 mother-infant pairs) from 14 countries. All forms of extra support analysed together showed an increase in duration of 'any breastfeeding' (includes partial and exclusive breastfeeding) (relative risk (RR) for stopping any breastfeeding before six months 0.91, 95% confidence interval (CI) 0.86 to 0.96). All forms of extra support together had a larger effect on duration of exclusive breastfeeding than on any breastfeeding (RR 0.81, 95% CI 0.74 to 0.89). Lay and professional support together extended duration of any breastfeeding significantly (RR before 4-6 weeks 0.65, 95% 0.51 to 0.82; RR before 2 months 0.74, 95% CI 0.66 to 0.83). Exclusive breastfeeding was significantly prolonged with use of WHO/UNICEF training (RR 0.69, 95% CI 0.52 to 0.91). Maternal satisfaction was poorly reported.

Authors' conclusions
Additional professional support was effective in prolonging any breastfeeding, but its effects on exclusive breastfeeding were less clear. WHO/UNICEF training courses appeared to be effective for professional training. Additional lay support was effective in prolonging exclusive breastfeeding, while its effects on duration of any breastfeeding were uncertain. Effective support offered by professionals and lay people together was specific to breastfeeding and was offered to women who had decided to breastfeed.

Further trials are required to assess the effectiveness (including cost-effectiveness) of both lay and professional support in different settings, particularly those with low rates of breastfeeding initiation, and for women who wish to breastfeed for longer than three months. Trials should consider timing and delivery of support interventions and relative effectiveness of intervention components, and should report women's views. Research into appropriate training for supporters (whether lay or professional) of breastfeeding mothers is also needed.

PLAIN LANGUAGE SUMMARY

Support for breastfeeding mothers

There is extensive evidence on the short-term and long-term health benefits of breastfeeding for infants and mothers. In 2003, the World Health Organization recommended that, wherever possible, infants should be fed exclusively on breast milk until six months of age. However, in some high-income countries, many mothers stop breastfeeding before they want to and this causes disappointment for the mothers and more health problems for the infants. This review looked at whether providing support for breastfeeding mothers, either from professionals, or from trained lay people, or both, would help mothers to continue to breastfeed. The review found 34 studies, from 14 countries, including almost 30,000 women. Both professional and lay support were effective, and together they were also effective, in areas where initiation and continuation of breastfeeding was not high. Further research is needed to identify the aspects of support that are the most effective.

BACKGROUND

There is extensive evidence of short-term and long-term health benefits of breastfeeding for infants and mothers. Early benefits include reduced mortality in preterm infants (Lucas 1990a), reduced infant morbidity from gastro-intestinal, respiratory, urinary tract and middle-ear infections and less atopic illness (Aniansson 1994; Cesar 1999; Howie 1990; Kramer 2001; Lucas 1990b; Marild 2004). There is some evidence that exclusive breastfeeding is associated with the lowest rates of these illnesses in the first six months of life (Kramer 2002; Raisler 1999).

Breastfeeding offers some protection against the development of childhood diseases such as juvenile onset insulin dependant diabetes mellitus (Sadauskaite 2004; Virtanen 1991); raised blood pressure (Taittonen 1996; Wilson 1998; Singhal 2001); obesity (Fewtrell 2004; Gillman 2001) and the development of diseases in later life such as atopic disease (Fewtrell 2004) and raised blood pressure (Fewtrell 2004; Martin 2004). Breastfeeding has also been associated with significantly higher scores for cognitive development (Anderson 1999; Fewtrell 2004).

As well as health benefits to infants, breastfeeding has an impact on maternal health too (Labbock 2001). Studies have demonstrated a lower incidence of breast cancer (Beral 2002; Newcombe 1994), ovarian cancer (Gwinn 1990; Rosenblatt 1993) and hip fractures (Cumming 1993) in those women who have breastfed.

The established health benefits of breastfeeding to a nation have resulted in global and national support for encouraging the commencement and continuation of breastfeeding. In 2003 the World Health Organization recommended that, wherever possible, infants should be fed exclusively on breast milk until six months of age (WHO 2003). In England two aims are to raise the breastfeeding initiation rate by two percentage points per year (DoH 2002) and to support the World Health Organization recommendation (WHO 2003) of exclusive breastfeeding for the first six months of life (DoH 2003).

Despite the established benefits of breastfeeding, breastfeeding rates in many developed countries continue to be resistant to change. In the UK, the breastfeeding initiation rate was 69% in 2000 (Hamlyn 2002). A similar figure is reported in the US (US-DoHHS 2005). However, in both the UK and USA there is a marked decline in breastfeeding within the first few weeks after initiation, and exclusive breastfeeding is rare. Conversely, some other European countries, such as Scandinavia and Germany (Cattaneo 2003), have high initiation and continuation breastfeeding rates (Nicoll 2002).

There are many factors that might influence the early cessation of breastfeeding. In developed countries, young mothers and those in low-income groups or those who ceased full-time education at an early age are least likely to either start breastfeeding or continue for a period of time sufficient to confer health gain (Hamlyn 2002). Enkin notes that industrial societies, on the whole, do not provide women with the opportunity to observe other breastfeeding women before they attempt breastfeeding themselves (Enkin 2000). In such societies, women are at risk of lack of support to breastfeed their babies. Paradoxically, in poorer countries, more affluent groups may have lower breastfeeding rates (Chhabra 1998; Rogers 1997). This is particularly important as there is a protective effect when breastfeeding continues for long periods of time, resulting in reduced infant mortality and child mortality in the second year of life in less developed countries (WHO 2000).

Although some women will choose to breastfeed their infant for a limited amount of time, or not at all, there is evidence that many women are disappointed that they have not been successful in breastfeeding for longer. Hamlyn 2002 reports that 87% of mothers who ceased breastfeeding within six weeks of birth would have liked to breastfeed for longer. For those mothers who breastfed for at least six months, 37% would have preferred to continue for longer.

Clearly there is a need to review the support mothers receive when breastfeeding to determine what might be effective in helping women continue to breastfeed. The purpose of this review was to examine interventions which provide extra support for mothers who wish to breastfeed; and to assess their impact on breastfeeding duration and exclusivity and, where recorded, on health outcomes

and maternal satisfaction. Specific objectives of the review were to describe forms of support which have been evaluated in controlled studies, and the settings in which they have been used. It was also of interest to examine the effectiveness of different modes of offering similar supportive interventions (for example, face-to-face or over the telephone), and whether interventions containing both antenatal and postnatal elements were more effective than those taking place in the postnatal period alone. We also planned to examine the effectiveness of different care providers and training programmes and the effect of baseline breastfeeding prevalence (where known) on the effectiveness of supportive interventions.

OBJECTIVES

(1) To describe forms of breastfeeding support which have been evaluated in controlled studies, the timing of the interventions and the settings in which they have been used.

(2) To examine the effectiveness of comparable interventions and compare effectiveness in low- and high-income groups where possible.

(3) To examine the effectiveness of different modes of offering similar supportive interventions (for example, face-to-face or over the telephone), and whether interventions containing both antenatal and postnatal elements were more effective than those taking place in the postnatal period alone.

(4) To compare the effectiveness of different care providers and training.

(5) To explore the interaction between baseline breastfeeding prevalence (where known) and effectiveness of support.

CRITERIA FOR CONSIDERING STUDIES FOR THIS REVIEW

Types of studies

All randomised or quasi-randomised controlled trials, with or without blinding, and with a minimum of 75% follow up.

Types of participants

Participants were pregnant women intending to breastfeed, postpartum women intending to breastfeed and women breastfeeding their babies.

Types of intervention

Contact with an individual or individuals (either professional or volunteer) offering support which is supplementary to standard care (in the form of, for example, appropriate guidance and encouragement) with the purpose of facilitating continued breastfeeding. Studies were included if the intervention occurred in the postnatal period alone or also included an antenatal component. Interventions taking place in the antenatal period alone were excluded from this review, as were interventions described as solely educational in nature.

Types of outcome measures

The main outcome measure was the effect of the interventions on duration of any breastfeeding to specified points in time. Outcomes were recorded for stopping feeding before four to six weeks and two, three, four, six, nine and 12 months. Other outcomes of interest were exclusive breastfeeding, measures of neonatal and infant morbidity (where available) and measures of maternal satisfaction with care or feeding method.

SEARCH METHODS FOR IDENTIFICATION OF STUDIES

See: Cochrane Pregnancy and Childbirth Group methods used in reviews.

We searched the Cochrane Pregnancy and Childbirth Group's Trials Register by contacting the Trials Search Co-ordinator (January 2006).

The Cochrane Pregnancy and Childbirth Group's Trials Register is maintained by the Trials Search Co-ordinator and contains trials identified from:
(1) quarterly searches of the Cochrane Central Register of Controlled Trials (CENTRAL);
(2) monthly searches of MEDLINE;
(3) handsearches of 30 journals and the proceedings of major conferences;
(4) weekly current awareness search of a further 37 journals.

Details of the search strategies for CENTRAL and MEDLINE, the list of handsearched journals and conference proceedings, and the list of journals reviewed via the current awareness service can be found in the 'Search strategies for identification of studies' section within the editorial information about the Cochrane Pregnancy and Childbirth Group.

Trials identified through the searching activities described above are given a code (or codes) depending on the topic. The codes are linked to review topics. The Trials Search Co-ordinator searches the register for each review using these codes rather than keywords.

In addition, we searched MEDLINE (1966 to November 2005), EMBASE (1974 to November 2005) and handsearched Midwives Information and Resource Service (MIDIRS) quarterly Digest from 1991 to September 2005. We scanned secondary references and obtained relevant studies. Details of the search strategies can be obtained from the review authors.

We did not apply any language restrictions.

METHODS OF THE REVIEW

Titles and abstracts of the electronic searches were assessed for inclusion by a review author and a research assistant (Felicia McCormick (FM), Natasha Danson). All the included trials offered an intervention to breastfeeding women with the purpose of encouraging continued breastfeeding. All articles identified were available in English. Two review authors independently read articles identified via the search strategy to determine inclusion or exclusion (Cathryn Britton (CB), FM). Any differences in opinion were resolved in consultation with a third author (Mary Renfrew). When information regarding the study was unclear, we attempted to contact authors of original reports to provide further details. Angie Wade and Sarah King provided statistical advice and review.

We designed a data extraction form. Two authors (CB, FM) used data extraction forms and quality appraisal forms independently. One author extracted and the second author checked the data. Disagreements were resolved through discussion between the authors. We identified 34 randomised or quasi-randomised controlled trials from 14 countries as eligible for inclusion in this review. We extracted the following study characteristics and entered them in the table of included studies: country, setting, demographic data on study group and controls, study design, randomisation procedure, intervention package, length and completeness of follow up, description of withdrawals and drop-outs, blinding of assessors and outcome measures. We used Review Manager software (RevMan 2003) to double enter all the data.

We assessed the method of allocation concealment used in each study using criteria outlined in the Cochrane Handbook for Systematic Reviews of Interventions (Higgins 2005). We categorised studies according to whether the method of allocation concealment reported was judged to have been adequate (A), unclear (B) inadequate (C), or if allocation was not concealed (D). We also checked study reports for clear descriptions of inclusion and exclusion criteria; randomisation methods; withdrawals and drop-outs; statistical analysis used; blinding of outcome assessment; and intention-to-treat analysis. Methods used for generation of the randomisation sequence are described in the 'Characteristics of included studies' table. Included trials had a minimum of 75% initial follow up. When included trials reported data at more than one time point and follow-up rates fell, we included only data from time points where follow-up rates were at least 75% in the analysis.

We carried out statistical analysis using RevMan 2003. We analysed data on an intention-to-treat basis whenever possible, even if intention-to-treat analysis had not been used in the study report. When cluster-randomised trials were incorporated, we calculated effective sample sizes and entered these into the meta-analyses. We determined effective sample sizes via calculation of the intraclass correlation coefficient, where the data were available, or through consideration of the relative sizes of the confidence intervals obtained from analyses which did and did not correct for clustering of the outcomes.

We calculated relative risk as the preferred estimate of treatment effect. We preferred random-effects models to perform all meta-analyses since studies were clinically heterogeneous. We also undertook subgroup analyses of all studies offering support compared with those that had adequate allocation concealment; studies in settings with high, medium and low baseline breastfeeding initiation rates; support offered by professional, lay or a combination of professional and lay supporters; face-to-face, phone or balanced telephone and face-to-face contact; and postnatal support alone or support with an antenatal component.

DESCRIPTION OF STUDIES

For this review update, we identified 354 new references. After screening, we selected 14 new trials for inclusion.

The previous version of this review (Sikorski 2002) identified one trial of lay support in progress in Scotland. Further information about this trial was not available in time for this update; however, it has since been published (Muirhead 2006). The completed trial of trained lay breastfeeding counsellors in London identified by Sikorski (Sikorski 2002) has since been published and is included in this review as Graffy 2004. The study by Dennis included in Sikorski 2002, using data from Dennis's thesis, has since been published, and we have made this publication the primary reference for this study in this review (Dennis 2002).

This review has a total of 34 included studies which come from 14 countries. Six studies were conducted in each of the following countries: Canada (Dennis 2002; Gagnon 2002; Lynch 1986; Mongeon 1995; Pinelli 2001; Porteous 2000); USA (Brent 1995; Chapman 2004; Frank 1987; Grossman 1990; Pugh 2002; Wrenn 1997); UK (Graffy 2004; Jenner 1988; Jones 1985; Moore 1985; Morrell 2000; Winterburn 2003). Four studies were conducted in Brazil (Albernaz 2003; Barros 1994; Leite 1998; Santiago 2003); two studies were conducted in Bangladesh (Haider 1996; Haider 2000) and Australia (McDonald 2003; Quinlivan 2003). Single studies came from India (Bhandari 2003), Nigeria (Davies-Adetugbo 1997), Italy (Di Napoli 2004), Iran (Froozani 1999), the Netherlands (Kools 2005), Belarus (Kramer 2001), Mexico (Morrow 1999) and Sweden (Sjolin 1979).

The total number of mother-infant pairs included is 29,385.

There were 42 excluded studies. The main reasons for exclusion were high loss to follow up, evaluation of an educational intervention and lack of data. Full details are available in the 'Characteristics of excluded studies' table.

The main purpose of this review was to analyse the impact of the intervention, extra breastfeeding support, with the purpose of fa-

cilitating continued breastfeeding. We included studies if the intervention occurred in the postnatal period alone or also included an antenatal component. We excluded interventions taking place in the antenatal period alone, as well as interventions described as solely educational in nature.

The main outcome measure was the effect of the intervention on duration of breastfeeding to specified points in time. Outcomes were recorded for stopping feeding before four to six weeks and two, three, four, six, nine and 12 months. Other outcomes of interest were exclusive breastfeeding, measures of neonatal and infant morbidity (where available) and measures of maternal satisfaction with care or feeding method.

Personnel and training

The included studies evaluated support provided by a variety of medical, nursing and allied professionals (for example, nutritionists) as well as lay people. Lay support was either voluntary or remunerated. In previous editions of this review, support has been categorised as either 'professional' or 'lay'. A new category, 'lay and professional', has been devised for this update. Nineteen studies used professionals for support (Albernaz 2003; Davies-Adetugbo 1997; Di Napoli 2004; Frank 1987; Froozani 1999; Gagnon 2002; Grossman 1990; Jones 1985; Kools 2005; Kramer 2001; Lynch 1986; McDonald 2003; Moore 1985; Pinelli 2001; Porteous 2000; Quinlivan 2003; Santiago 2003; Sjolin 1979; Wrenn 1997). Nine studies used lay people for support (Chapman 2004; Dennis 2002; Graffy 2004; Haider 2000; Jenner 1988; Leite 1998; Mongeon 1995; Morrell 2000; Morrow 1999) and six studies used a combination of both professional and lay people (Barros 1994; Bhandari 2003; Brent 1995; Haider 1996; Pugh 2002; Winterburn 2003).

Details of those involved in providing support and the interventions used are given in the table of 'Characteristics of included studies'. Eight studies (Albernaz 2003; Davies-Adetugbo 1997; Di Napoli 2004; Froozani 1999; Haider 1996; Haider 2000; Kramer 2001; Leite 1998) used either the 18-hour or 40-hour WHO/UNICEF breastfeeding counselling/lactation management courses as the basis for the training of breastfeeding supporters. A further nine studies reported providing the supporter with extra formal training in breastfeeding support prior to the intervention (Bhandari 2003; Chapman 2004; Dennis 2002; Gagnon 2002; Graffy 2004; Morrell 2000; Mongeon 1995; Morrow 1999; Santiago 2003). Where the length of additional training was reported, this ranged from sessions lasting 2.5 hours to 40 hours.

We also subdivided the studies into broad categories to examine aspects of the interventions, as discussed in the Methods section.

Comparison groups

In the majority of studies, the comparison group was reported to have received 'usual postnatal care', which varies both between and within countries. The care at the time of the trials may also differ from that which is offered at the present time. Wherever there were individual study details on care received by the comparison groups, these are given in the 'Characteristics of included studies' table.

Outcomes

Breastfeeding was usually reported as being either partial or exclusive, with no further definitional refinement. Few studies reported both partial and exclusive rates at all time points. Reporting of health outcomes was scanty and inconsistent, allowing little joint analysis. The timing of outcome assessments varied considerably between studies, ranging from two weeks to one year postnatally. Several studies took repeated measurements of breastfeeding rates, and some reported mean duration.

Differences in groups studied

Support was usually offered to women intending to breastfeed, but in three studies (Brent 1995; Morrell 2000; Quinlivan 2003) intention to formula-feed was not an exclusion criterion. In the small study by Porteous (Porteous 2000), support was only offered to those breastfeeding women who identified themselves as unsupported on a self-report questionnaire. In two studies the intervention was targeted at low-income women (Chapman 2004; Pugh 2002), whereas the intervention was only offered to women under the age of 18 years in another (Quinlivan 2003).

In one study (Moore 1985), only women with a personal or partner history of asthma or eczema were selected. Two further trials (Davies-Adetugbo 1997; Haider 1996) studied the effect of support for mothers of sick infants with moderate diarrhoeal disease. One trial (Bhandari 2003) studied the effect of breastfeeding support delivered to communities and included diarrhoea prevalence outcomes. In another trial (Pinelli 2001), the focus of the study was the effect of breastfeeding support to parents of very low birthweight babies.

METHODOLOGICAL QUALITY

Each trial was assessed for quality as outlined in the Methods section. Fifteen of the 34 trials used an approach to allocation concealment considered adequate (A). In 12 trials the approach used was unclear (B), and seven used an approach considered inadequate (C). These assessments are among the details reported in the 'Characteristics of included studies' table of this review. For one trial (McDonald 2003), only the abstract of the study was available to review and this scored B.

RESULTS

The initial searches of MEDLINE and EMBASE identified 327 references. Twenty-seven references not identified by previous editions of the review were identified by a search of the Cochrane Pregnancy and Childbirth Group Trials Register. Fourteen new trials were finally added to the 20 that featured in Sikorski 2002.

The 34 studies included in this review are from 14 countries and include 29,385 mother-infant pairs.

Some studies used professional or lay individuals, or a combination of both. Data were collected regarding the effect of the intervention on breastfeeding duration. Some studies reported exclusive breastfeeding rates, but others were ambiguous and it was difficult to ascertain whether the infant was fed breast milk alone. We collected data on the effect of the interventions on any form of breastfeeding to assess the impact of interventions to enable women to continue breastfeeding.

Types of outcome measures

The main outcome measure was the effect of the interventions on duration of breastfeeding to specified points in time. Outcomes were recorded for stopping feeding before four to six weeks and two, three, four, six, nine and 12 months. Other outcomes of interest were exclusive breastfeeding, measures of neonatal and infant morbidity (where available) and measures of maternal satisfaction with care or feeding method.

Overall effect on any breastfeeding

The main summary outcome measure was breastfeeding at the time of the last study assessment up to six months. There continues to be a beneficial effect on the duration of any breastfeeding up to six months with the implementation of any form of extra support (relative risk (RR) 0.91, 95% confidence interval (CI) 0.86 to 0.96). However, it is noted that there was significant heterogeneity (I^2 = 53.6%). Sensitivity analysis using only studies with adequate allocation concealment demonstrated a similar result (RR 0.90, 95% CI 0.83 to 0.98, I^2 62.4%).

In order to explore any differential effect of support conditional on the baseline prevalence of breastfeeding in the area in which the trial was conducted, we divided the trials into three categories denoted by high (greater than 80%), intermediate (60% to 80%) or low (less than 40%) initiation rates in the local area. Analysis of the trials conducted in settings with intermediate breastfeeding initiation (Chapman 2004; Dennis 2002; Di Napoli 2004; Gagnon 2002; Graffy 2004; Jones 1985; Lynch 1986; Mongeon 1995; Morrell 2000; Pinelli 2001; Porteous 2000; Pugh 2002; Winterburn 2003; Wrenn 1997) demonstrated all forms of support had a significant benefit on breastfeeding (RR 0.92, 95% CI 0.85 to 0.98), whereas there was no significant effect where there were high rates of breastfeeding (RR 0.91, 95% CI 0.81 to 1.01) (Albernaz 2003; Barros 1994; Bhandari 2003, Froozani 1999; Kramer 2001; Kools 2005; Leite 1998; McDonald 2003; Morrow 1999; Quinlivan 2003). There was no significant effect in areas with low initiation rates (RR 0.88, 95% CI 0.69 to 1.12) (Brent 1995; Frank 1987; Grossman 1990).

Analysis of results at different periods of follow up presented some challenges in interpreting the data. There was variability between the studies regarding the time points when data were collected, therefore caution has to be exercised when interpreting the trends. However, analysis of results at different periods of follow up suggested that the benefit of all forms of support was present at all time points up to nine months.

Overall effect on exclusive breastfeeding

The effect of any support on mothers exclusively breastfeeding is greater than on women continuing any form of breastfeeding (RR 0.81, 95% CI 0.74 to 0.89) (Albernaz 2003; Bhandari 2003; Frank 1987; Froozani 1999; Gagnon 2002; Graffy 2004; Haider 2000; Jenner 1988; Kools 2005; Kramer 2001; Leite 1998; McDonald 2003; Moore 1985; Morrell 2000; Morrow 1999; Porteous 2000; Pugh 2002; Santiago 2003; Sjolin 1979; Wrenn 1997). There is significant heterogeneity in this group of 20 trials (I^2 = 92.2%). Those women who receive any form of support are less likely to give up exclusive breastfeeding before five months.

Professional support

Trials comparing an intervention of extra professional support to usual care in preventing the cessation of any breastfeeding showed professional support to be effective at four months but not at other time points (RR for stopping any breastfeeding before four months in five trials 0.78, 95% CI 0.67 to 0.91) (Albernaz 2003; Frank 1987; Froozani 1999; Quinlivan 2003; Sjolin 1979). However, the overall effect of extra professional support on stopping any breastfeeding did not reach statistical significance (RR for stopping any breastfeeding before last study assessment up to six months in 16 trials 0.94, 95% CI 0.87 to 1.01) (Albernaz 2003; Frank 1987; Froozani 1999; Gagnon 2002; Grossman 1990; Di Napoli 2004; Jones 1985; Kools 2005; Kramer 2001; Lynch 1986; McDonald 2003; Pinelli 2001; Porteous 2000; Quinlivan 2003; Sjolin 1979; Wrenn 1997). There was heterogeneity present among the 16 trials (I^2 = 49.8%).

Professional support resulted in a beneficial effect on exclusive breastfeeding (RR 0.91, 95% CI 0.84 to 0.98) (Albernaz 2003; Frank 1987; Froozani 1999; Gagnon 2002; Kools 2005; Kramer 2001; Lynch 1986; McDonald 2003; Moore 1985; Porteous 2000; Sjolin 1979; Wrenn 1997). This is apparent in the first few months (RR before four to six weeks 0.69, 95% CI 0.51 to 0.92; RR before two months 0.76, 95% CI 0.61 to 0.94; RR before three months 0.84, 95% CI 0.72 to 0.99).

Lay support

Trials that used lay people to deliver the intervention demonstrated a significant reduction in breastfeeding cessation at the time of the last study assessment (RR 0.86, 95% CI 0.76 to 0.98) (Chapman 2004; Dennis 2002; Graffy 2004; Leite 1998; Mongeon 1995; Morrell 2000; Morrow 1999). Significant heterogeneity was present among these studies (I^2 = 75.6%). Further subgroup analysis did not reveal a statistically significant effect at any time point up to four months. However, in the studies of lay support which reported exclusive breastfeeding, there was a marked reduction in the cessation of exclusive breastfeeding before the last study assessment (RR 0.72, 95% CI 0.57 to 0.90) (Graffy 2004; Haider 2000; Jenner 1988; Leite 1998; Morrell 2000; Morrow

1999). There was heterogeneity among these studies (I^2 = 96.3%). Further subgroup analysis indicated that this effect was significant within the first three months (RR before four to six weeks 0.66, 95% 0.46 to 0.96; RR before two months 0.44, 95% CI 0.26 to 0.73; RR before three months 0.42, 95% CI 0.31 to 0.57).

Combined professional and lay support

Five studies compared combined lay and professional support with usual care (Barros 1994; Bhandari 2003; Brent 1995; Pugh 2002; Winterburn 2003). Overall these showed a significant reduction in cessation of any breastfeeding (RR 0.84, 95% CI 0.77 to 0.92, I^2 = 55.7%), especially in the first two months (RR before four to six weeks 0.65, 95% 0.51 to 0.82; RR before two months 0.74, 95% CI 0.66 to 0.83). Two studies (Bhandari 2003; Pugh 2002) demonstrated a significant reduction in cessation of exclusive breastfeeding (RR 0.62, 95% CI 0.50 to 0.77, I^2 = 82.2%). However, these results should be viewed with caution as the numbers analysed are small, and there was only one high-quality trial included in this section (Bhandari 2003).

We performed subgroup analyses to test formally for significant differences between the groups offering professional support, lay support and combined professional and lay support. For stopping any breastfeeding there was no evidence of difference between subgroups except for borderline difference at two months (p=0.0468), where the tendency was for combined support to be most effective. For stopping exclusive breastfeeding, there were significant differences for all times tested (three months, four months, six months), and at each time point either lay or combined lay and professional support was most effective.

Differing modes and timing of support

The studies that offered face-to face support showed a statistically significant benefit (RR for giving up any breastfeeding 0.85, 95% CI 0.79 to 0.92) (Albernaz 2003; Barros 1994; Bhandari 2003; Brent 1995; Chapman 2004; Froozani 1999; Jones 1985; Kramer 2001; Leite 1998; Morrell 2000; Morrow 1999; Pinelli 2001; Quinlivan 2003; Winterburn 2003). The overall test for heterogeneity was I^2 = 57.4%. In those studies where telephone support was offered, no significant effect was demonstrated (RR 0.92, 95% 0.78 to 1.08) (Dennis 2002; Frank 1987; Grossman 1990; Lynch 1986; Mongeon 1995). Where both telephone and face-to-face support were provided, there was no significant improvement in breastfeeding continuance (RR 1.00, 95% CI 0.91 to 1.09) (Di Napoli 2004; Gagnon 2002; Graffy 2004; Kools 2005; McDonald 2003; Porteous 2000; Pugh 2002; Sjolin 1979; Wrenn 1997).

The effect on stopping any breastfeeding at last study assessment before six months that was measured in studies of interventions containing an antenatal element to breastfeeding support (RR 0.92, 95% CI 0.83 to 1.02) was not significant, whereas the effect in those studies offering postnatal support alone did achieve statistical significance (RR 0.89, 95% CI 0.84 to 0.96). However, effect estimates were similar and the difference between the effect of interventions containing an antenatal element and the effect of interventions offering postnatal support alone was not statistically significant.

Health outcomes

There was a highly significant beneficial effect on exclusive breastfeeding two to three weeks after discharge from a healthcare facility in the two studies of support for mothers with sick infants (RR for stopping exclusive breastfeeding before two to three weeks after discharge 8.32, 95% CI 4.94 to 14.01, I^2 = 0%) (Haider 1996; Davies-Adetugbo 1997). Three studies (Bhandari 2003; Davies-Adetugbo 1997; Haider 1996) reported on recurrence of diarrhoea. There was a marked short-term reduction in the recurrence of diarrhoea in these trials (RR for recurrence before two to three weeks follow-up (RR 0.70, 95% CI 0.54 to 0.9). There was statistical heterogeneity among these three studies (I2 = 53.8%). In the study by Haider (Haider 1996), eight babies in the control group and two babies in the intervention group had died two weeks after discharge from hospital. The difference in the populations in these trials, when compared to the healthy mother-infant dyads included in other studies, led to their exclusion from the main meta-analysis.

Few trials reported health outcomes and it was not possible to combine these statistically. The PROBIT study (Kramer 2001) found a significant reduction in the risk of one or more gastrointestinal infections and of atopic eczema in the group receiving care from health professionals who had received the WHO/UNICEF Baby Friendly Initiative training. There was no significant reduction in respiratory tract infection. Frank 1987 found no difference in breastfeeding rates in those infants rehospitalised during their study while Froozani 1999 observed a significant reduction in the mean number of days of gastrointestinal illness in the group receiving support but no significant difference in respiratory illness.

Measures of satisfaction

Satisfaction measures were poorly reported. Jones 1985 reported satisfaction with the amount of help received, both at home and in hospital, and found this to be greater in the intervention group. Two studies reported maternal satisfaction with infant feeding. Dennis (Dennis 2002) found no significant differences between the peer and control groups' mean scores on the Maternal Breastfeeding Evaluation Scale (mean scores 53.81 (standard deviation (SD) 5.69) versus 52.98 (SD 5.94), P = 0.26) (Leff 1994). However, significantly more mothers in the control group reported overall dissatisfaction with their infant feeding method. Graffy 2004 reported no difference between intervention group and control group on most measures but found the intervention group were less likely to believe they were not making enough milk.

Socially disadvantaged groups

One study (Jones 1985) reported effects of the supportive intervention in different social groups. In this study, the greatest difference in the proportion of women still breastfeeding at four weeks was in social classes IV and V (86% of social classes IV and V in

the intervention group breastfeeding at four weeks versus 58% in social classes IV and V in the control group, P < 0.01). In the UK people are classified into social groupings according to their (or their partner's) occupation, for example, social class IV and V includes women with partners in manual or unskilled occupations.

In two further studies, low-income women from the US were included (Chapman 2004; Pugh 2002), and in another study (Quinlivan 2003) women under the age of 18 years were recruited.

Effect of differing training programmes

Eight trials (Albernaz 2003; Davies-Adetugbo 1997; Di Napoli 2004; Froozani 1999; Haider 1996; Haider 2000; Kramer 2001; Leite 1998) reported using either the 18- or 40-hour WHO/UNICEF breastfeeding training courses. Another trial (Bhandari 2003) used a course based on an adaptation of the WHO Integrated Management of Childhood Illness Training Manual on Breastfeeding Counselling (WHO 1997). Meta-analysis of the six trials using WHO/UNICEF training (Albernaz 2003; Bhandari 2003; Froozani 1999; Haider 2000; Kramer 2001; Leite 1998) showed significant benefit in prolonging exclusive breastfeeding (RR 0.69, 95% CI 0.52 to 0.91) but the trials were statistically heterogeneous (I^2 = 97.9%).

Two trials (Chapman 2004; Morrow 1999) used the peer counsellor programme developed by La Leche League, the international lay breastfeeding support organisation and in Graffy 2004 the counsellors were trained by the National Childbirth Trust, a UK-based childbirth and breastfeeding advocacy organisation.

The length of training offered to lay supporters varied from 2.5 hours (Dennis 2002) to 40 hours (Albernaz 2003; Haider 2000). Other studies reported providing some extra training in breastfeeding support prior to the intervention (Dennis 2002; Gagnon 2002; Mongeon 1995; Morrell 2000; Santiago 2003).

DISCUSSION

This review adds several trials to its predecessor (Sikorski 2002). The reporting of these studies was often not comprehensive - lacking, for example, in terms of details of the training and qualifications of the supporters, the definitions used of the extent of breastfeeding and in the description of adherence to the support protocol. There was also a failure to present details of the informational element of the interventions and of the care received by the comparison groups. Nevertheless, the studies included in the review are of a higher overall quality than its predecessor, with 15 of the 34 trials using an approach to allocation concealment considered adequate.

These factors, together with the diversity of supportive interventions and the widely differing timing of study end-points, should urge some caution in the interpretation of the analysis of pooled data.

Despite this caution, the overall benefit found from all forms of supportive intervention has been explored with subgroup analysis and is moderately robust following exclusion of the methodologically weaker trials. It has been noted that the greatest effect of support interventions on breastfeeding women occurred in communities with intermediate levels of breastfeeding initiation.

While the effect size of support interventions on reducing the cessation of any breastfeeding is modest, there is evidence of a greater effect on the prolongation of exclusive breastfeeding. There was a marked reduction in the cessation of exclusive breastfeeding within the first three months when lay support was used. Professional support, lay support and combinations of lay and professional support did not differ significantly in their effect on the continuance of any breastfeeding, though there was a tendency for combined professional and lay support to be more effective. For continuance of exclusive breastfeeding, lay support and combinations of lay and professional support were more effective than professional support alone. These effects are also well illustrated in the studies of sick children, where the attendant short-term health benefits of exclusive breastfeeding are demonstrated.

It would appear that strategies that depend mainly on face-to-face support appear more effective than those that rely primarily on telephone contact.

Our attempts to determine the most helpful elements of support strategies should be treated with some caution as there is inconsistent reporting due to variations in the timing of outcome assessments.

AUTHORS' CONCLUSIONS

Implications for practice

Consideration should be given to providing supplementary breastfeeding support as part of routine health service provision. There is evidence for the effectiveness of additional professional support in prolonging exclusive breastfeeding. WHO/UNICEF training courses appear to be an effective model for professional training. Lay support is effective in promoting exclusive breastfeeding and any breastfeeding. Support offered by professionals and lay people together can be effective in prolonging any breastfeeding, especially within the first two months.

Face-to-face support appears to be more effective than support by telephone but there is as yet no evidence to suggest that the duration of breastfeeding is improved by routine antenatal contact. Evidence supports the promotion of exclusive breastfeeding as central to the management of diarrhoeal illness in partially breastfed infants.

Implications for research

There are several areas which require further study in the light of the results of this review.

- Further trials are required to assess the effectiveness of lay, professional and combined support in different settings - in particular in those communities with low rates of breastfeeding initiation.

- Trials should test the effectiveness of different training programmes (which should be well-defined and reproducible) and should attempt to address impact on both exclusive and any breastfeeding where possible.

- Prospective economic analyses are required to accompany trials to establish the cost-effectiveness of different interventions.

- Implementation of the Baby Friendly Initiative should be accompanied by the continued monitoring of breastfeeding rates to explore whether its effect is similar in countries with differing rates of initiation and prevalence of breastfeeding.

- Further probing of the components of support interventions that are effective or ineffective should be encouraged, together with consideration of the significance of the timing and delivery of the support intervention.

- Further trials to investigate appropriate strategies for supporting women who wish to breastfeed longer than two months are required.

- Further exploration of maternal satisfaction should be included in future trials as this element is consistently poorly evaluated.

POTENTIAL CONFLICT OF INTEREST

None declared.

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* *Indicates the major publication for the study*

TABLES

Characteristics of included studies

Study	Albernaz 2003
Methods	Primary care facilities. Recruitment over 5 months, n = 169. Follow up 95%. Outcome assessment not blinded.

Characteristics of included studies (*Continued*)

Participants	3 hospitals in the city of Pelotas, in southern Brazil. Ethnic composition not described. Inclusion criteria: term healthy baby, family income at least US $500 pcm (no economic constraints to baby's growth), mother intends to breastfeed and does not smoke. Baseline prevalence of breastfeeding in Brazil in the first 30 days = 88%.
Interventions	Hospital visit, home visits at 5, 15, 30, 45, 90 and 120 days, and 24 hour telephone hotline for help or to arrange visits. Two members of the lactation support team had received the 40 h WHO lactation support training course.
Outcomes	Breastfeeding pattern and duration up to age 4 months. Breastmilk intake for a subgroup of 68 infants at 4 months.
Notes	Authors state that children in the control group attended paediatric clinics where general advice on advantages of breastfeeding may have been offered, but specific lactation counseling was not provided.
Allocation concealment	A – Adequate

Study	**Barros 1994**
Methods	Single-site study, n = 900. Six month follow up 93%. Stated as randomised but method not described. Reasons for drop-out recorded. Outcome assessor independent of intervention.
Participants	Urban setting in Brazil: in-patient maternity unit. Ethnic composition not described. Inclusion criteria: family income less than twice the minimum Brazilian wage; hospital stay less than 5 days; wanting to breastfeed: living within the city of Pelotas. Baseline prevalence in Pelotas (1993) for any breastfeeding: 85% at 1 month, 66% at 3 months and 38% at 6 months.
Interventions	Three home visits at 5, 10 and 20 days postpartum by a social assistant or nutritionist. The visitor was required to have a personal history of successfully breastfeeding a child and received training in breastfeeding physiology and common breastfeeding problems and their solutions.
Outcomes	Breastfeeding at monthly intervals to 6 months and median duration of breastfeeding. Time to introduction of artificial feeds. Difficulties encountered during breastfeeding and reasons for weaning also recorded.
Notes	In usual care, a social assistant would not normally make routine home visits but would visit only when requested to do so by the hospital team.
Allocation concealment	B – Unclear

Study	**Bhandari 2003**
Methods	Cluster-randomised study with 8 sites, n = 1115. 6 month follow up 86%. Communities were paired on the basis of similar scores for socio-economic, mortality and morbidity indicators. One of each pair was allocated to the intervention using a random numbers table. Reasons for dropout recorded. Outcome assessment not blinded.
Participants	8 village communities located 3-5 km from the main highway in Haryana, India. Inclusion criteria: born in a study village within 9 months of start of intervention. Baseline breastfeeding prevalence stated to be high.
Interventions	Health and nutrition workers in the intervention communities received training based on Integrated Management of Childhood Illnesses Training Manual on Breastfeeding Counseling (WHO 1997). Messages - feed only breastmilk for first 6 months of life; breastfeed the infant day and night, at least 8 times in 24 h; possible adverse effects of other foods and fluids given to breastfeeding infants - given to mothers at birth, monthly home visits, immunisation clinics and neighbourhood meetings.
Outcomes	Feeding at 3 months. Anthropometry and diarrhoea prevalence at 3 and 6 months.
Notes	Control communities received routine care.
Allocation concealment	A – Adequate

Characteristics of included studies (*Continued*)

Study	**Brent 1995**
Methods	Single-site study. Duration not stated, n = 115. Follow up 94%. Randomisation partially described but allocation concealment unclear. Reasons for drop-out not recorded. Outcome assessment not independent of intervention. Potential confounders: women were excluded from intervention group following randomisation if they had received fewer than 2 prenatal lactation consultations; intention-to-treat analysis not performed (8 women in control group who met lactation consultant excluded); intervention included input to staff caring for both intervention and control groups.
Participants	Urban USA - ambulatory care centre and in-patient maternity unit. Inclusion criteria: English speaking; nulliparous. Exclusion criteria: separated from child at birth; preterm delivery; child in NICU longer than 72 hours. Ethnic composition: described as 71% white. 90% of participants were eligible for WIC programmes for those on low income. Baseline prevalence of breastfeeding at birth in national WIC sample = 33% (1991).
Interventions	Package of: 2-4 prenatal sessions with lactation consultant (10-15 minutes each); telephone call 48 hours after discharge; visit to lactation clinic at 1 week postpartum (staffed by paediatrician or lactation consultant); contact with lactation consultant at each health supervision visit until weaning or 1 year; professional education of nursing and medical staff.
Outcomes	Rates of breastfeeding at 2 months and median duration of breastfeeding.
Notes	Control group were offered optional prenatal breastfeeding classes, postpartum breastfeeding instruction by nurses and physicians and out-patient follow up by nurses and physicians in the paediatric ambulatory department. Study population not limited to those intending to breastfeed.
Allocation concealment	B – Unclear

Study	**Chapman 2004**
Methods	Recruitment July 2000 - August 2002 at an urban US hospital with BFI accreditation. 219 women met antenatal inclusion criteria and were randomised by being entered into a data file weekly, with SPSS randomly selecting approximately 50%. These were assigned to the intervention group and the others were controls. Further inclusion criteria specified term, healthy, singleton baby, with no congenital abnormalities, no maternal history of HIV and no admission to NICU. After birth, n = 165 women remained in the study, 90 in the intervention group and 75 controls. Follow up at 3 months was 77/90 (87%) and 67/75 (89%). Reasons for postnatal loss to follow up are not reported. Blinding of outcome assessment was attempted.
Participants	Urban US hospital prenatal clinic serving a low-income, predominantly Latina population. Antenatal inclusion criteria: low-income women at least 18 years old, at 26 weeks' gestation or less, considering breastfeeding, not yet enrolled in peer counseling programme, resident in hospital area, available for telephone follow up. Postnatal inclusion criteria: healthy, full term singleton infants, no congenital abnormalities, no maternal history of HIV. Ethnic composition: 80% Hispanic (61% Puerto Rican origin), 9% African American, 3% white, 8% other. Breastfeeding prevalence low.
Interventions	Package of: one prenatal home visit, daily visits during postpartum hospitalisation, home visit within 24 hours and at least 2 more home visits as requested, and telephone/pager contact. Package delivered by peer Counsellors who received 30 hours classroom training using combined curricula of LLLI Peer Counseling Program and Hispanic Health Council's BHP program. Peer counsellors had to score 85% in a written exam and worked for 3-6 months with experienced peer counsellors. After demonstrating competence, peer counsellors worked independently with clients. Peer counsellors had 1 hour per month continuing education and were paid for their work.
Outcomes	Breastfeeding rates at birth and 1, 3 and 6 months postpartum. Subgroups most responsive to breastfeeding peer counseling.
Notes	Those in the control group received routine breastfeeding education offered by the study hospital, and the same breastfeeding services as privately paying women. A small amount of exposure to peer counselors among the control group was reported.

Allocation concealment	B – Unclear

Study	**Davies-Adetugbo 1997**
Methods	Participants recruited from 8 public health maternity units. Duration of recruitment 6 months, n = 1003. Follow up 86%. Randomisation appropriate. Reasons for drop out not recorded. Outcome assessment blinded.
Participants	Osun State, rural Nigeria. Primary healthcare centre and home visits. Inclusion criteria: children presenting with uncomplicated diarrhoea to primary health care facility. Exclusions: severe diarrhoea. Baseline prevalence (UNICEF): exclusive breastfeeding at 0-3 months = 22%. Breastfeeding with complementary foods 6-9 months = 44%.
Interventions	Lactation management/counseling sessions by Community Health Workers and 2 research assistants. Training: adapted WHO breastfeeding counseling and BFI courses. 18 hours duration. Sessions on days 0, 2 and 7, lasting 30 minutes.
Outcomes	Exclusive and partial breastfeeding at 1 and 3 weeks postintervention. Recurrence of diarrhoea.
Notes	
Allocation concealment	C – Inadequate

Study	**Dennis 2002**
Methods	Single-site study recruiting over 10 months, n = 258. 99% follow up. Randomisation appropriate. Outcome assessor blinded.
Participants	Women at home in Toronto, Canada. Inclusion criteria: English speaking; primiparous; 16 years or over; single full-term baby. Intending to breastfeed. Predominantly educated, Caucasian and over 25 years with income over $40,000/year. Baseline prevalence: breastfeeding initiation 79%; 35% exclusive breastfeeding at 4 months.
Interventions	Telephone support by briefly-trained volunteers (2.5 hour session) who had personal breastfeeding experience for at least 6 months. First contact within 48 hours of hospital discharge and then as required. Mean number of contacts in those completing log-books = 5.4. Mean duration of telephone contact = 16.2 min. 97% of contacts by telephone. 3% at home.
Outcomes	Breastfeeding (any or exclusive) at 1, 2 and 3 months.
Notes	
Allocation concealment	A – Adequate

Study	**Di Napoli 2004**
Methods	Single-site study. Mothers recruited March 2000-December 2001, n = 605; 303 assigned to intervention group and 302 to control group by 'simple randomisation technique'. Follow-up rates for breastfeeding outcomes collected up to 180 days but after 60 days follow-up rates were less than 75% so only outcomes up to 60 days are included in this review. Reasons for drop-out reported by group. Outcome assessment not blinded.
Participants	Urban Italy. Inclusion criteria: mothers in public maternity ward in Rome, intending to breastfeed. Exclusion criteria: mothers who did not speak Italian, had no phone, breastfeeding medically contraindicated, baby in SCBU. Ethnic composition not defined. Baseline national breastfeeding initiation rate 70%.
Interventions	Home visit and telephone contact. Home visit, from one of the 6 midwives from the maternity ward of the study hospital, took place within 7 days of hospital discharge. Telephone breastfeeding counseling session provided by the same midwife. These midwives had attended the UNICEF 18 h intensive training course on breastfeeding techniques and management.
Outcomes	Any breastfeeding up to 60 days.
Notes	Extra information about reported numbers requested and received from author.

Characteristics of included studies (*Continued*)

Allocation concealment	A – Adequate

Study	**Frank 1987**
Methods	Single-site study recruiting over 17 months, n = 343. Follow up 94%. Appropriate randomisation procedures. Reasons for drop-out recorded. Independent outcome assessment.
Participants	Urban USA: in-patient maternity unit. Inclusion criteria: breastfed once in hospital; able to speak Spanish or English; baby needed less than 48 hours on NICU; contactable by telephone after discharge. 57% primiparous. Ethnic composition: black 65%, Hispanic 19%, white 13%, other 4%. Socio-economic status defined by: < 100% poverty level - 69%; 100%-200% poverty level - 21%; > 200% poverty level - 10%. Mean age of participants 25.7 years. No baseline data available.
Interventions	(1) Postpartum research breastfeeding counseling by counsellor in hospital (20-40 minutes) and by telephone at 5, 7, 14, 21, 28, days and 6, 8 and 12 weeks. 24 hour advice by pager. (2) Research discharge pack in English and Spanish.
Outcomes	Exclusive breastfeeding at 1, 2, 3 and 4 months. Any breastfeeding at 4 months. Median duration of breastfeeding. Time to introduction of formula or solids. Rehospitalisation of infants.
Notes	Routine care consisted of postpartum staff nursing contacts (including discharge teaching session on infant care), infrequent breastfeeding classes, written information on breastfeeding management and the opportunity to access a midwife-run telephone advice line.
Allocation concealment	A – Adequate

Study	**Froozani 1999**
Methods	Single-site study recruiting over 7 months, n = 134. Follow up 90%. Assignment by day (odd or even) of baby's birth. Outcome assessment not blinded.
Participants	Urban Iran. Women without breastfeeding experience or chronic disease giving birth normally at term to a healthy baby 2.5 kg or over. National baseline prevalence: 96% breastfeeding with complementary foods at 6-9 months (UNICEF).
Interventions	Nutritionist trained using WHO Breastfeeding Counseling training course (40 hours). Contact in hospital immediately after birth, between 10 and 15 days, after 30 days and monthly to the 4th month at home or in a lactation clinic.
Outcomes	Exclusive breastfeeding at 1, 2, 3 and 4 months. Mean number of days illness with diarrhoea.
Notes	
Allocation concealment	C – Inadequate

Study	**Gagnon 2002**
Methods	Study conducted at a University teaching hospital and affiliated community health centres. Recruitment January 1997-September 1998, n = 586, 292 assigned to intervention group and 294 to control group by stratifying women by parity into blocks of 8 using computer-generated table of random numbers. Numbers, but not reasons for dropout reported. Outcome assessment was blinded.
Participants	Urban Quebec, Canada. Inclusion criteria: mothers participating in hospital short-stay programme. Ethnic and socio-economic composition of sample not reported. Baseline prevalence of breastfeeding initiation in Canada (excluding territories) 1994-5 = 73%.
Interventions	Home visit from community nurse 3-4 days postpartum. Nurses were Baccalaureate prepared, had minimum 3 years clinical experience in maternal-child health, and had attended training to ensure assessment skills of maternal-newborn and breastfeeding support. Nurse contact continued if felt it was required.
Outcomes	Breastfeeding frequency and infant weight gain assessed at 2 weeks postpartum.
Notes	

Allocation concealment	B – Unclear

Study	**Graffy 2004**
Methods	Study conducted in 32 general practices in the UK. Recruitment April 1995-August 1998, n = 720, 363 assigned to intervention group and 357 to control group by numbered sealed envelopes prepared from random permuted blocks. Reasons for drop-out recorded. Outcome assessment blinded.
Participants	Urban South-East England. Inclusion criteria: mothers considering breastfeeding who had not breastfed a previous child for 6 weeks. Exclusion criteria: planning to contact a breastfeeding counsellor, address considered unsafe to visit, baby born before 36 weeks' gestation. Ethnic composition of sample: 59% white (UK) participants, 11% white (other) participants, 16% African or Caribbean, 8% Indian subcontinent, 6% other. Socioeconomic status on RG classification: 10% I, 26% II, 19% IIINM, 26% IIIM, 12% IV, 3% V, 5% other. First baby: 74%. National baseline prevalence 66% breastfeeding at birth.
Interventions	Intervention group were allocated to receive one antenatal visit from a National Childbirth Trust trained breastfeeding counsellor, who offered postnatal support by telephone or further visits if the mother requested this after the birth.
Outcomes	Prevalence of any breastfeeding to 6 weeks; duration of any breastfeeding to 4 months; time to introduction of formula feeds; maternal satisfaction and common feeding problems; mothers' perspectives on support from counsellors; association between counseling uptake and feeding behaviour.
Notes	
Allocation concealment	A – Adequate

Study	**Grossman 1990**
Methods	Single-site study recruiting over 10 months, n = 97. Follow up 90%. Quasi-randomised (coin toss with women sharing same room allocated by the same toss). Drop-out reasons not recorded. Outcome assessment not independent.
Participants	Urban USA - in-patient maternity unit. Inclusion criteria: women eligible for WIC programme services for those on low incomes; women intending to breastfeed. Approximately one-third were primiparous. Ethnic composition described as 54% black. Mean age 25.4 years. WIC breastfeeding prevalence at birth 1991 = 33%.
Interventions	Package of: face-to-face meeting in hospital with lactation counsellor (a registered nurse) after birth lasting 30-45 minutes - educational booklet given; telephone contacts on days 2, 4, 7, 10 and 21; a telephone helpline staffed by a nurse or paediatrician; back up support for those with problems from a lactation clinic.
Outcomes	Rates of breastfeeding at 6 weeks and 3 and 6 months. Median duration of breastfeeding.
Notes	Control group received routinely available postnatal teaching regarding infant care and feeding by obstetrical nursing staff.
Allocation concealment	C – Inadequate

Study	**Haider 1996**
Methods	Single-site study. Duration of recruitment not stated, n = 250 mother-infant pairs. Follow up 83%. Randomisation procedures appropriate. Reasons for drop-out recorded. Outcome assessment not independent. Potential confounders: control group received a postdischarge home visit by a lactation counsellor without 'intervening for breastfeeding management'; intervention group members were encouraged to stay in hospital until diarrhoea had resolved; significant difference in percentage of primiparous women in the control and intervention groups (44% vs 65%; P = 0.007).
Participants	Mothers with infants admitted to a diarrhoeal disease hospital in Bangladesh. Inclusion criteria: infants less than 12 weeks old; diarrhoea for less than 5 days; living within 15 km of Dhaka. Exclusion criteria:

	severe infection; mothers unable to stay with infants. 44% were primiparous. Baseline prevalence for hospital attenders in Dhaka 1993-94 = 63% partial breastfeeding; 28% non-breastfed.
Interventions	Package of: counseling in hospital by a lactation counsellor or research physician (trained using the UNICEF/WHO course) on days 1 and 2 and the day of discharge (1st for 5-7 minutes, 2nd and 3rd for 30-40 minutes); home visit by lactation counsellor lasting 2-4 hours; encouraged to stay in hospital until the diarrhoea had resolved.
Outcomes	Exclusive and predominant breastfeeding on discharge and exclusive breastfeeding at 2 weeks follow up. Episodes of diarrhoea between discharge and follow up.
Notes	Control group mothers attended daily health education sessions, which included advice on exclusive breastfeeding for 5 months.
Allocation concealment	A – Adequate

Study	**Haider 2000**
Methods	Community-based cluster-randomised study. Recruitment over 10 months, n = 726. Follow up 79%. Randomisation appropriate. Reasons for drop-out recorded. Outcome assessment not blinded.
Participants	Dakka, Bangladesh. Mainly lower-middle and low socio-economic status. Women aged 16-35 with 3 children or fewer (or 5 or less pregnancies) and no serious illness. Multiple births; children with congenital abnormalities, and those weighing less than 1800 g were excluded. National baseline prevalence reported in paper to be similar to control group rates. UNICEF quotes higher rates - 53% exclusive breastfeeding at 0-3 months.
Interventions	Peer counseling by women with personal breastfeeding experience trained over 40 hours with the WHO/UNICEF Breastfeeding Counseling course. Paid honorarium. Supervised caseload of 12-25 mothers. 15 home visits: 2 in last trimester/4 in month 1/2-weekly in months 2-5. Duration of visits 20-40 minutes.
Outcomes	Exclusive breastfeeding at birth, 4 days, 4 weeks, 2, 3, 4 and 5 months.
Notes	
Allocation concealment	B – Unclear

Study	**Jenner 1988**
Methods	Recruitment location/duration not stated, n = 38. 100% follow up. Alternate assignment. Outcome assessment not blinded.
Participants	White, working-class women 19-32 years, living with partner and intending to breastfeed. Prevalence breastfeeding 1985 = 64% at birth and 26% at 4 months.
Interventions	Face-to-face and telephone support by single lay supporter (mother/previous breastfeeding experience). No indication of training. Control group received 1 antenatal home visit and one postnatal hospital visit. Intervention group received 3 antenatal home visits/1 hospital visit/1 'immediate' home visit and 1 or 2 further home visits 'in the early weeks'.
Outcomes	Breastfeeding at 3 months. Partial breastfeeding grouped with formula feeding as 'breastfeeding failure'.
Notes	Moderate-to-high risk of bias.
Allocation concealment	C – Inadequate

Study	**Jones 1985**
Methods	Single-site study. Recruitment period 18 months, n = 678. Follow up 96%. Quasi-randomisation using alternating two-week periods. Reasons for drop-out recorded. Independent outcome assessment. Potential confounder: Late exclusion of 66 women because of overlap of recruitment periods.
Participants	UK - maternity department of district general hospital. Inclusion criteria: all women who attempted at least one breastfeed. Exclusion criteria: birth of child overlapped intervention and control periods. 55% of

	the sample were primiparous. Ethnic composition not stated. Socio-economic status defined by UK census categories (I and II 22%, III 46%, IV and V 13%). Baseline prevalence see Jenner 1988.
Interventions	Individual support and problem solving by lactation nurse in hospital and at home. Duration of the intervention not specified.
Outcomes	Breastfeeding rates at 4 weeks, 3, 6 and 12 months. Satisfaction with care and intention to breastfeed next pregnancy.
Notes	
Allocation concealment	C – Inadequate

Study	**Kools 2005**
Methods	Cluster-randomised study with 10 sites, divided into 2 groups, which had similar numbers of births and breastfeeding rates. Allocation by coin flip. Recruitment December 2000-December 2002, n = 781, 408 women in sites assigned to the intervention and 373 in sites assigned to the control group. Reasons for drop-out reported. Blinding of outcome assessment unclear.
Participants	Child healthcare centres in Limbourg province, Netherlands. Inclusion criteria: mothers applying for maternity care at any of the 10 centres. Exclusion criteria: birthweight < 2000 g. Ethnic composition not defined. Baseline prevalence of breastfeeding initiation 80% in the Netherlands in 2002.
Interventions	Programme with three elements: structured health counseling by maternity and child healthcare nurses and physicians; booklet to transfer information between caregivers and between mother and caregivers and used at each consultation; lactation consultancy available via caregiver faxing consultant with details of problem (consultant would then contact the caregiver or mother within 24 hours of receiving the fax).
Outcomes	Exclusive and complementary breastfeeding rates at 3 months; determinants of breastfeeding at 3 months.
Notes	
Allocation concealment	A – Adequate

Study	**Kramer 2001**
Methods	Multi-site cluster-randomised study. Recruitment period 19 months, n = 17,046. Follow up 96.7%. Randomisation appropriate. Outcome assessment not blinded.
Participants	Urban and rural sites within Belarus. Inclusion criteria: intention to breastfeed, healthy mother, child 2500 g or more at term, Apgar 5 or more at 5 mins. Baseline breastfeeding prevalence 50% at 3 months.
Interventions	WHO/UNICEF Baby Friendly Initiative training for all staff dealing with mothers and babies in hospitals and community polyclinics. Infants seen monthly for polyclinic well-child visits and whenever ill.
Outcomes	Any breastfeeding at 3, 6, 9 and 12 months. Incidence of respiratory, gastro-intestinal and atopic eczema in first year.
Notes	
Allocation concealment	A – Adequate

Study	**Leite 1998**
Methods	Participants recruited from 8 public health maternity units. Duration of recruitment 6 months, n = 1003. Follow up 86%. Randomisation appropriate. Reasons for drop-out not recorded. Outcome assessment blinded.
Participants	Urban Brazil. Inclusion criteria: healthy babies, weighing < 3000 g, discharged at < 5 days. Exclusion criteria: twins, important health problems in mother or child. Rate of exclusive + predominant breastfeeding in North-East Brazil in 1994 = 50%.
Interventions	Peer counsellor home visits lasting 30-40 minutes at 5, 15, 30, 60, 90 and 120 days. Counsellors from same social group as women they supported, had personal experience of breastfeeding and had been associated with

	maternity unit milk bank for a minimum of 5 years. Trained with adapted WHO breastfeeding counseling course (20 hours). Paid $4 per visit. Each counsellor supported 25 mothers.
Outcomes	Rates of exclusive, predominant, partial and artificial feeding at 4 months.
Notes	Study targeted babies with birthweights below 3000 g.
Allocation concealment	A – Adequate

Study	**Lynch 1986**
Methods	Single site study. Duration of recruitment not stated, n = 270. 100% follow up. Randomisation procedure not described. Outcome assessment independent. Possible confounders: significant differences in baseline characteristics were present for parity (P = 0.02) and intention to return to work (P = 0.05).
Participants	Urban Canada - maternity unit of regional general hospital. Inclusion criteria: intending to breastfeed; English speaking. Exclusion criteria: multiple births; birthweight < 2500 gm; birth before 37 weeks. 41% were primiparous. Ethnic composition not described. Socio-economic status defined by Blishen scale for husband's occupation (62% groups 2-3). Baseline prevalence (1984) = 69% breastfeeding initiation (75% stopping by 6 months).
Interventions	Combination of home visit by breastfeeding consultant within 5 days of hospital discharge (duration 2 hours) and telephone calls by the consultant weekly for 1 month and monthly from 2-6 months.
Outcomes	Duration of breastfeeding.
Notes	Routine care group received postpartum home visit by public health nurse who gave breastfeeding advice determined largely by the questions and concerns of the mother.
Allocation concealment	B – Unclear

Study	**McDonald 2003**
Methods	Information from published abstract. Randomised controlled trial stratified by tertiary education and parity. Randomisation to two groups. Intervention: Extended Midwifery care (EM) n = 425, and Control - Standard Midwifery care (SM) n = 424, within strata of tertiary education. Recruitment March 2000-October 2001. Abstract does not include details of allocation concealment, outcome assessment or loss to follow up. Outcomes included in the abstract are reported by intention-to-treat.
Participants	Researcher based at La Trobe University, Victoria, Australia. Participants were women intending to breastfeed their term infants. Baseline prevalence of breastfeeding in Australia = 83% at hospital discharge.
Interventions	The intervention group received an in-hospital postnatal education session. Post-discharge, they were offered home support visits with a research midwife once per week and telephone contact at least twice per week for 6 weeks. The control group received routine midwifery support and information as per the hospital protocol.
Outcomes	Abstract reports any breastfeeding and exclusive breastfeeding at 6 months.
Notes	Further details not available at preparation of this update (June 2005).
Allocation concealment	B – Unclear

Study	**Mongeon 1995**
Methods	Single-site study. Duration of recruitment not stated, n = 200. Follow up 97%. Quasi-randomised (drawing numbered tickets). Reasons for drop-out recorded. Independent outcome assessment.
Participants	Urban Canada - antenatal meetings in a community health district. Inclusion criteria: women who wish to breastfeed and who have not previously breastfed. 97% of subjects were primiparous. Ethnic composition not stated. 57% had received education to college or university level. No specific socio-economic classification used. Baseline prevalence data - see Dennis 1999.
Interventions	Home visit by volunteer during last month of pregnancy followed by telephone contacts weekly for 6 weeks and then 2 weekly to 5 months or until weaning. Volunteers were women who had breastfed themselves

	and had received 3 training sessions of 3 hours duration followed by on-going monthly supervision sessions. Average caseload 1-3 cases at any one time.
Outcomes	Breastfeeding rates at 1, 2, 3, 4 and 6 months.
Notes	Control group received home visit from public health nurse during the first month after birth followed by other contacts (face-to-face or by telephone) as determined by the mother.
Allocation concealment	C – Inadequate

Study	**Moore 1985**
Methods	Single-site study. 19 months recruitment, n = 525. Follow up 90%. Randomisation procedure not stated. Reasons for drop-out recorded. Outcome assessment not independent. Possible confounder: inclusion criterion and racial exclusion criterion designed for trial of atopic allergy prevention.
Participants	Urban UK - antenatal clinic of city maternity hospital. Inclusion criterion: personal or partner history of atopy. Exclusion criteria: non-white women; unsure EDD; multiple pregnancy. Socio-economic status not described. Baseline prevalence 1980 = 65% at birth and 25% at 4 months.
Interventions	Package of: daily visits as hospital in patient by health visitor or clinical medial officer followed by home visit 4-6 weeks postnatally and the support of a 24 hour telephone advice line. Subsequent follow up at home or in hospital at 3, 6 and 12 months.
Outcomes	Exclusive breastfeeding at 3 months.
Notes	This study was designed as a trial to prevent the development of atopic allergy by promoting exclusive breastfeeding. Sample size requirements for such a trial were not met. Control group received standard hospital infant feeding advice.
Allocation concealment	B – Unclear

Study	**Morrell 2000**
Methods	Single-site study recruiting over 14 months, n = 632. Follow up 78%. Randomisation appropriate.
Participants	Urban UK. All English-speaking women 17 years or over giving birth at the study hospital unless their baby spent more than 48 hours on the SCBU. National baseline prevalence 66% breastfeeding at birth and 42% at 4 months. Exclusive breastfeeding 21% at 4 months.
Interventions	Community postnatal support worker. 8 week training. Home-based support of up to 10 visits in the first 28 days. Maximum 3 hours per visit.
Outcomes	Exclusive or any breastfeeding at 6 weeks and 6 months.
Notes	Study population not limited to those intending to breastfeed.
Allocation concealment	A – Adequate

Study	**Morrow 1999**
Methods	Community-based cluster-randomised study. Recruitment over 18 months, n = 130. Follow up 96% to 3 months, 80% to 6 months. Randomisation appropriate.
Participants	Peri-urban Mexican community. All pregnant or postnatal women in 39 geographical clusters. Perinatal death only clinical exclusion criterion. Baseline breastfeeding prevalence: 92% initiation; 4% exclusivity at 2 weeks and 3 months; 50% cessation by 6 months.
Interventions	Home visits by peer-counsellors trained by La Leche League. (7 days theoretical teaching/2 months in lactation clinics and with mother to mother support groups.) Personal breastfeeding experience not essential. 2 intervention groups 1. 6 visits (mid and late pregnancy and 1, 2, 4 and 8 weeks) 2. 3 visits (late pregnancy and 1 and 2 weeks). 30% secondary education.
Outcomes	Breastfeeding at 3 and 6 months. Incidence of diarrhoea in infants 0-3 months.

Characteristics of included studies (*Continued*)

Notes	
Allocation concealment	A – Adequate

Study	**Pinelli 2001**
Methods	Single-site study of VLBW babies (birthweight 1500 g or less). Duration of recruitment not stated, n = 128, 64 assigned to the intervention and 64 to control group by use of random number tables and sealed, opaque envelopes. Reasons for drop-out not reported. Blinding of outcome assessment unclear.
Participants	NICU in teaching hospital in Ontario, Canada. Inclusion criteria: VLBW babies born at and admitted to NICU of study hospital, or transferred in with mother within 72 hours of birth: fed mother's milk by parental choice. Exclusion criteria: multiple births, infants with severe congenital, surgical or chromosomal abnormalities, parents who did not speak English. Ethnic composition "generally white". Baseline prevalence of breastfeeding initiation in Canada (excluding territories) 1994-5 = 73%.
Interventions	SSBC programme with four elements: video on breastfeeding premature infants; individual counseling by research lactation consultant (who was not a member of hospital staff); weekly in-hospital contact; post-discharge contact through first year of life or until breastfeeding discontinued.
Outcomes	Duration of breastfeeding to 12 months; per cent human milk intake of total fluid intake to 12 months; breastfeeding problems, resources for advice and reasons for discontinuation; factors influencing breastfeeding duration.
Notes	Fathers were included in this study. Participants were parents of infants with birthweight 1500 g or less. Mean gestational age of these infants at birth was 29 weeks.
Allocation concealment	A – Adequate

Study	**Porteous 2000**
Methods	Single-site study recruiting over 3 months, n = 52. Follow up 98%. Recruitment limited by availability of investigator. Randomisation appropriate. Outcome assessment not blinded.
Participants	Urban Canada. Inclusion criteria: singleton pregnancy, healthy mother and child, vaginal delivery, self-identified on breastfeeding questionnaire as unsupported. Baseline breastfeeding prevalence approximately 33% at 4 months.
Interventions	Support by community midwife: daily visits in hospital; telephone call within 72 hours of discharge; minimum of 1 home visit (in first week). Home visits 60-90 mins.
Outcomes	Exclusive and partial breastfeeding at 4 weeks.
Notes	Study population specifically limited to those identifying themselves as unsupported.
Allocation concealment	B – Unclear

Study	**Pugh 2002**
Methods	Single-site study. Recruitment April 1999-February 2000, n = 41; 21 assigned to intervention and 20 to control group by sealed envelope. 100% follow up at 6 months with no drop-outs recorded. Blinding of outcome assessment unclear.
Participants	Community intervention in urban USA. Inclusion criteria: low-income women receiving financial medical assistance. Exclusion criteria not stated. Ethnic composition: 95.2% African American.
Interventions	Breastfeeding support visits by community health nurse/peer counsellor team. Support offered daily when in hospital, and at home during weeks 1, 2 and 4 and at the team's discretion. Telephone support from peer counsellor twice weekly through week 8 and monthly through month 6.
Outcomes	Duration of breastfeeding to 6 months; healthcare services use by infants; costs.
Notes	Low-income women (receiving financial medical assistance).
Allocation concealment	A – Adequate

Characteristics of included studies (*Continued*)

Study	**Quinlivan 2003**
Methods	Single-site study. Recruitment July 1998-December 2000, n = 136; 65 assigned to the intervention and 71 to the control group by computer-generated randomised allocation schedule concealed in numbered, sealed opaque envelopes. Reasons for drop-out recorded. Outcome assessment not blinded.
Participants	Urban Australia. Inclusion criteria: teenagers aged less than 18 years attending first antenatal appointment at public-care teenage pregnancy clinic for first time mothers; English speaking; intending to continue with the pregnancy and not relinquish the infant. Exclusion criteria: residence > 150 km from the study hospital; known fetal abnormality. Ethnic composition of sample: 24% indigenous Australian. Socioeconomic status: 86.5% of sample scored low or destitute on score derived from educational level of participant and her parents, and family income. Baseline prevalence of breastfeeding in Australia = 83% at hospital discharge.
Interventions	Structured home visits in weeks 1 and 2 by certified nurse-midwives to teach feeding and maternal-infant bonding skills. Further visits at months 1, 2, 3 and 4 to provide advice and support.
Outcomes	Adverse neonatal outcomes (infant death, severe non-accidental injury and non-voluntary foster care); knowledge and practice of contraception, vaccination schedules and breastfeeding.
Notes	Participants were recruited at a teenage pregnancy clinic serving mostly disadvantaged women. The intervention was offered regardless of feeding intention or practice.
Allocation concealment	A – Adequate

Study	**Santiago 2003**
Methods	Single-site study. Recruitment: August 2000-July 2002, n = 101; 35 assigned to control group, 33 to intervention group 1 and 33 to intervention group 2 by 'a simple lots procedure'. Follow up rates 100% at 4 months with no drop-outs reported. Blinding of outcome assessment unclear.
Participants	Urban setting in Minas Gerais, Brazil. Inclusion criteria: mother breastfeeding her well, term baby when appointment for paediatric clinic made; first clinic consultation took place, at 30 days or less. Exclusion criteria: mothers who expressed a preference to see a particular paediatrician; babies no longer breastfed at the first appointment. Ethnic composition: 62% of babies white. Baseline prevalence of breastfeeding in Brazil in the first 30 days = 88%.
Interventions	Intervention group 1: babies were monitored by a trained paediatrician working with a multidisciplinary breastfeeding team. Intervention group 2: babies were monitored by the same paediatrician, in individual consultations. The paediatrician and team had all received training in promoting exclusive breastfeeding (MB training).
Outcomes	Exclusive breastfeeding to 4 months.
Notes	Control group babies were monitored by a paediatrician who did not have formal MB lactation training.
Allocation concealment	B – Unclear

Study	**Sjolin 1979**
Methods	Single-site study. Duration 12 months, n = 146. Follow up 100%. Quasi-randomised (births before and after midnight). No drop-out reported. Outcome assessment not independent.
Participants	Urban Sweden - maternity ward of University Hospital. Inclusion criteria; resident in Uppsala; normal birth; healthy babies weighing > 3 kg. Ethnic composition not stated. 28% of mothers had completed college or university education. Baseline prevalence (1972): 4% breastfeeding at 24 weeks.
Interventions	'Interview' with paediatrician in hospital on days 1 and 4 and at home at 2 and 6 weeks and 3 months; telephone contact weekly while breastfeeding followed by home visit if problem noted.
Outcomes	Partial and exclusive breastfeeding at 2, 4, 8, 12, 16, 20 and 24 weeks.
Notes	Primarily designed as a study of the reasons for breastfeeding difficulties and the cessation of breastfeeding. Recruitment halted during holidays.

Characteristics of included studies (*Continued*)

Allocation concealment	C – Inadequate

Study	**Winterburn 2003**
Methods	Single-site study. Duration of recruitment not reported, n = 72, 30 allocated to the intervention and 42 to the control group. Method of allocation not reported. 100% follow up at 3 months with no drop-outs reported. Blinding of outcome assessment unclear.
Participants	Community study in North Trent, England, UK. Inclusion criteria: mothers attending for antenatal care on one area. Other details not reported. National baseline prevalence 66% breastfeeding at birth.
Interventions	The midwife asked mothers during their pregnancy to identify a close female confidante who could support them to breastfeed, and visited the mother and confidante together during the third trimester to discuss breastfeeding.
Outcomes	Duration of breastfeeding to 3 months; women's satisfaction with the intervention; midwives' assessments of the intervention.
Notes	Numerical outcome data provided by the researcher.
Allocation concealment	B – Unclear

Study	**Wrenn 1997**
Methods	Single-site, two-group quasi-randomised study (even numbers to intervention and odd numbers to control group). Recruitment April 1999-February 2000, n = 186, with 79 assigned to the intervention and 107 to the control group. Information on drop-outs incomplete. Blinding of outcome assessment unclear.
Participants	Urban USA - military hospital in Texas. All participants were members of the armed forces or their dependents. Inclusion criteria: mothers on postpartum ward of study hospital; aged 18+; primiparous; uncomplicated delivery and postpartum; healthy baby; mother planned to breastfeed for at least 6 weeks. Exclusion criteria: hospitalisation of mother or baby for > 4 days; mothers who did not speak English. Ethnic composition of sample: 63% white, 11% black, 20% Hispanic, 2% Asian, 3% other. Baseline breastfeeding rate in Texas at hospital discharge = 67% in 1999.
Interventions	Breastfeeding support in hospital visit lasting approximately 30 minutes, home visit 2-4 days after discharge lasting 45-60 minutes, and phone call 10-14 days after the home visit.
Outcomes	Breastfeeding attrition to 6 weeks.
Notes	
Allocation concealment	B – Unclear

BFI: Baby Friendly Initiative (UNICEF)
EDD: expected date of delivery
h: hour(s)
HIV: Human Immunodeficiency Virus
LLLI: La Leche League International
MB training: maternal breastfeeding training
min: minute(s)
NICU: Neonatal Intensive Care Unit
pcm: per calendar month
RG: Registrar General
SCBU: Special Care Baby Unit
SPSS: Statistical Package for the Social Sciences
SSBC: supplementary structured breastfeeding counselling
VLBW: very low birthweight
WHO: World Health Organization
WIC: Special Supplemental Nutrition Programme for Women, Infants and Children (US Department of Agriculture, Food and Nutrition Service)
vs: versus

Characteristics of excluded studies

Study	Reason for exclusion
Barnet 2002	Intervention did not have the purpose of facilitating continued breastfeeding.
Black 2001	Intervention did not have the purpose of facilitating continued breastfeeding.
Bloom 1982	No numerical outcomes. Author could not be contacted.
Bolam 1998	Evaluates an educational intervention.
Cattaneo 2001	Intervention was training, and participants were hospitals.
Chen 1993	Author unable to provide data in form suitable for analysis.
Davies-Adetugbo 1996	Controlled study of breastfeeding counseling intervention without randomisation.
Ellis 1984	32% loss to follow up.
Forster 2004	Evaluates an educational intervention.
Gagnon 1997	44% post-randomisation exclusions.
Gross 1998	Cluster study without design effect. 38% loss to follow up.
Grossman 1987	Abstract with no numerical outcomes. Author could not be contacted.
Guise 2003	Paper is a review.
Hall 1978	30% loss to follow up in control group.
Hauck 1994	Intervention was a booklet and did not involve contact with an individual.
Henderson 2001	Evaluates an educational intervention.
Kistin 1994	Non-randomised observational study.
Labarere 2003	Evaluates an educational intervention.
Lavender 2004	Evaluates an educational intervention.
Lieu 2000	Support was not supplementary to standard care.
MacArthur 2002	Intervention was not breastfeeding support. No breastfeeding outcomes reported.
Mattar 2003	Evaluates an educational intervention.
McInnes 2000	Geographical controls.
McKeever 2002	30% loss to follow up in control group.
Neyzi 1991	Only 66% follow up in intervention group.
Pascali-Bonaro 2004	Paper is not about a trial.
Perez-Escamilla 1992	Study controlled but not randomised.
Ratner 1999	Intervention did not have the purpose of facilitating continued breastfeeding.
Rea 1999	Training intervention with no data on breastfeeding women.
Redman 1995	34% loss to follow up.
Reeve 2004	Evaluated an antenatal education intervention.
Rowe 1990	Abstract only available. No information on intervention used.
Rush 1991	Trial of hospital telephone helpline. No suitable outcome data available.
Schy 1996	Evaluates a purely educational intervention.
Sciacca 1995	Support intervention available to all women in the trial.
Segura-Millan 1994	Study controlled but not randomised.
Serafino-Cross 1992	Approximately 50% loss to follow up in control group (exact figure not published).
Steel O'Connor 2003	Support was not supplementary to standard care.
Valdes 2000	Study controlled but not randomised.

Characteristics of excluded studies (*Continued*)

Westphal 1995	Intervention was training, and participants were hospitals.
Wiggins 2005	Evaluates a social support intervention.
Wolfberg 2004	Follow up rates were 14%.

ANALYSES

Comparison 01. All forms of support versus usual care

Outcome title	No. of studies	No. of participants	Statistical method	Effect size
01 Stopping any breastfeeding before last study assessment up to 6 months			Relative Risk (Random) 95% CI	Subtotals only

Comparison 02. All forms of support versus usual care

Outcome title	No. of studies	No. of participants	Statistical method	Effect size
01 Stopping exclusive breastfeeding before last study assessment	20	7668	Relative Risk (Random) 95% CI	0.81 [0.74, 0.89]

Comparison 03. All forms of support versus usual care

Outcome title	No. of studies	No. of participants	Statistical method	Effect size
01 Stopping any breastfeeding at different times			Relative Risk (Random) 95% CI	Subtotals only
02 Stopping exclusive breastfeeding at different times			Relative Risk (Random) 95% CI	Subtotals only

Comparison 04. Professional support versus usual care

Outcome title	No. of studies	No. of participants	Statistical method	Effect size
01 Stopping any breastfeeding before last study assessment up to 6 months	16	5380	Relative Risk (Random) 95% CI	0.94 [0.87, 1.01]
02 Stopping exclusive breastfeeding before last study assessment	12	4133	Relative Risk (Random) 95% CI	0.91 [0.84, 0.98]

Comparison 05. Lay support versus usual care

Outcome title	No. of studies	No. of participants	Statistical method	Effect size
01 Stopping any breastfeeding before last study assessment	7	3079	Relative Risk (Random) 95% CI	0.86 [0.76, 0.98]

02 Stopping exclusive breastfeeding before last study assessment	6	3084	Relative Risk (Random) 95% CI	0.72 [0.57, 0.90]

Comparison 06. Professional support versus usual care

Outcome title	No. of studies	No. of participants	Statistical method	Effect size
01 Stopping any breastfeeding at different times			Relative Risk (Random) 95% CI	Subtotals only
02 Stopping exclusive breastfeeding at different times			Relative Risk (Random) 95% CI	Subtotals only

Comparison 07. Lay support versus usual care

Outcome title	No. of studies	No. of participants	Statistical method	Effect size
01 Stopping any breastfeeding at different times			Relative Risk (Random) 95% CI	Subtotals only
02 Stopping exclusive breastfeeding at different times			Relative Risk (Random) 95% CI	Subtotals only

Comparison 08. Differing modes of support versus usual care

Outcome title	No. of studies	No. of participants	Statistical method	Effect size
01 Stopping any breastfeeding before last study assessment up to 6 months	28	9997	Relative Risk (Random) 95% CI	0.91 [0.86, 0.96]

Comparison 09. Differing timings of support versus usual care

Outcome title	No. of studies	No. of participants	Statistical method	Effect size
01 Stopping any breastfeeding at last study assessment up to 6 months	28	9997	Relative Risk (Random) 95% CI	0.91 [0.86, 0.96]

Comparison 10. Differing training versus usual care

Outcome title	No. of studies	No. of participants	Statistical method	Effect size
01 Stopping exclusive breastfeeding before last study assessment			Relative Risk (Random) 95% CI	Subtotals only

Comparison 11. Support of mothers with sick children

Outcome title	No. of studies	No. of participants	Statistical method	Effect size
01 Exclusive breastfeeding 2 to 3 weeks after discharge from healthcare facility	2	419	Relative Risk (Fixed) 95% CI	8.32 [4.94, 14.01]
02 Recurrence of diarrhoea 2 to 3 weeks after discharge from healthcare facility	3	829	Relative Risk (Fixed) 95% CI	0.70 [0.54, 0.90]

Comparison 12. Lay support versus usual care

Outcome title	No. of studies	No. of participants	Statistical method	Effect size
01 Maternal satisfaction with infant feeding	1	251	Weighted Mean Difference (Fixed) 95% CI	0.83 [-0.61, 2.27]

Comparison 13. Lactation nurse versus usual care

Outcome title	No. of studies	No. of participants	Statistical method	Effect size
01 Sufficient help received with breastfeeding problems			Relative Risk (Fixed) 95% CI	Subtotals only

Comparison 14. Combination of lay and professional support versus usual care

Outcome title	No. of studies	No. of participants	Statistical method	Effect size
01 Stopping any breastfeeding at different times	10	5210	Relative Risk (Random) 95% CI	0.84 [0.77, 0.92]
02 Stopping exclusive breastfeeding at different times	5	1312	Relative Risk (Random) 95% CI	0.62 [0.50, 0.77]

INDEX TERMS

Medical Subject Headings (MeSH)

*Breast Feeding; Patient Education; Social Support

MeSH check words

Female; Humans

COVER SHEET

Title Support for breastfeeding mothers

Authors Britton C, McCormick FM, Renfrew MJ, Wade A, King SE

Contribution of author(s) This update is based on the previous Cochrane review 'Support for breastfeeding mothers' by Sikorski J, Renfrew MJ, Pindoria S, Wade A.
Felicia McCormick co-ordinated the update, undertook the searches and, with Natasha Danson, screened the search results and obtained papers.

	Cathryn Britton and Felicia McCormick data extracted and quality appraised papers with Mary Renfrew. Felicia McCormick, with Natasha Danson, wrote to authors for additional information. Cathryn Britton and Felicia McCormick entered the data into Review Manager. Angie Wade provided statistical advice about including cluster-randomised trials in the analyses. Sarah King advised on the interpretation of the data, particularly on heterogeneity. Cathryn Britton drafted the review; Mary Renfrew, Felicia McCormick, Angie Wade and Sarah King commented, and Cathryn Britton incorporated these comments.
Issue protocol first published	1998/3
Review first published	1999/1
Date of most recent amendment	10 November 2006
Date of most recent SUBSTANTIVE amendment	09 November 2006
What's New	January 2006 Searches updated. We have included fourteen new studies and excluded an additional 30 studies. Previous versions of this review categorised support as 'professional' or 'lay'. This edition introduces a new category: combined lay and professional support. Studies in this category demonstrated a significant effect on duration of any breastfeeding, especially in the first two months.
Date new studies sought but none found	Information not supplied by author
Date new studies found but not yet included/excluded	Information not supplied by author
Date new studies found and included/excluded	30 January 2006
Date authors' conclusions section amended	Information not supplied by author
Contact address	Ms Felicia McCormick Research Officer Mother and Infant Research Unit, Department of Health Sciences University of York Area 4, Seebohm Rowntree Building Heslington York YO10 5DD UK E-mail: fm510@york.ac.uk Tel: +44 1904 321827 Fax: +44 1904 321820
DOI	10.1002/14651858.CD001141.pub3
Cochrane Library number	CD001141
Editorial group	Cochrane Pregnancy and Childbirth Group
Editorial group code	HM-PREG

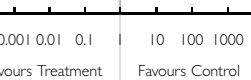
Analysis 01.01. Comparison 01 All forms of support versus usual care, Outcome 01 Stopping any breastfeeding before last study assessment up to 6 months

Review: Support for breastfeeding mothers

Comparison: 01 All forms of support versus usual care

Outcome: 01 Stopping any breastfeeding before last study assessment up to 6 months

Study	Treatment n/N	Control n/N	Relative Risk (Random) 95% CI	Weight (%)	Relative Risk (Random) 95% CI
01 All trials					
Albernaz 2003	25/94	41/94		1.5	0.61 [0.41, 0.92]
Barros 1994	280/450	293/450		6.7	0.96 [0.87, 1.05]
Bhandari 2003	31/221	29/189		1.2	0.91 [0.57, 1.46]
Brent 1995	39/58	52/57		4.1	0.74 [0.61, 0.90]
Chapman 2004	45/90	51/75		3.0	0.74 [0.57, 0.95]
Dennis 2002	25/132	43/126		1.4	0.55 [0.36, 0.85]
Di Napoli 2004	129/303	118/302		4.2	1.09 [0.90, 1.32]
Frank 1987	68/171	82/172		3.2	0.83 [0.65, 1.06]
Froozani 1999	11/67	17/67		0.6	0.65 [0.33, 1.28]
Gagnon 2002	45/292	51/294		1.8	0.89 [0.62, 1.28]
Graffy 2004	220/363	226/357		6.2	0.96 [0.85, 1.07]
Grossman 1990	42/49	38/48		4.3	1.08 [0.90, 1.30]
Jones 1985	142/228	257/355		6.1	0.86 [0.76, 0.97]
Kools 2005	188/265	162/242		6.1	1.06 [0.94, 1.19]
Kramer 2001	153/291	171/269		5.4	0.83 [0.72, 0.95]
Leite 1998	177/503	235/500		5.2	0.75 [0.64, 0.87]
Lynch 1986	81/135	79/135		4.0	1.03 [0.84, 1.25]
McDonald 2003	147/425	130/424		4.1	1.13 [0.93, 1.37]
Mongeon 1995	76/100	80/100		5.3	0.95 [0.82, 1.10]
Morrell 2000	259/311	264/312		7.5	0.98 [0.92, 1.05]
Morrow 1999	26/80	11/30		0.8	0.89 [0.50, 1.56]
Pinelli 2001	42/64	47/64		3.4	0.89 [0.71, 1.13]
Porteous 2000	1/27	8/25		0.1	0.12 [0.02, 0.86]



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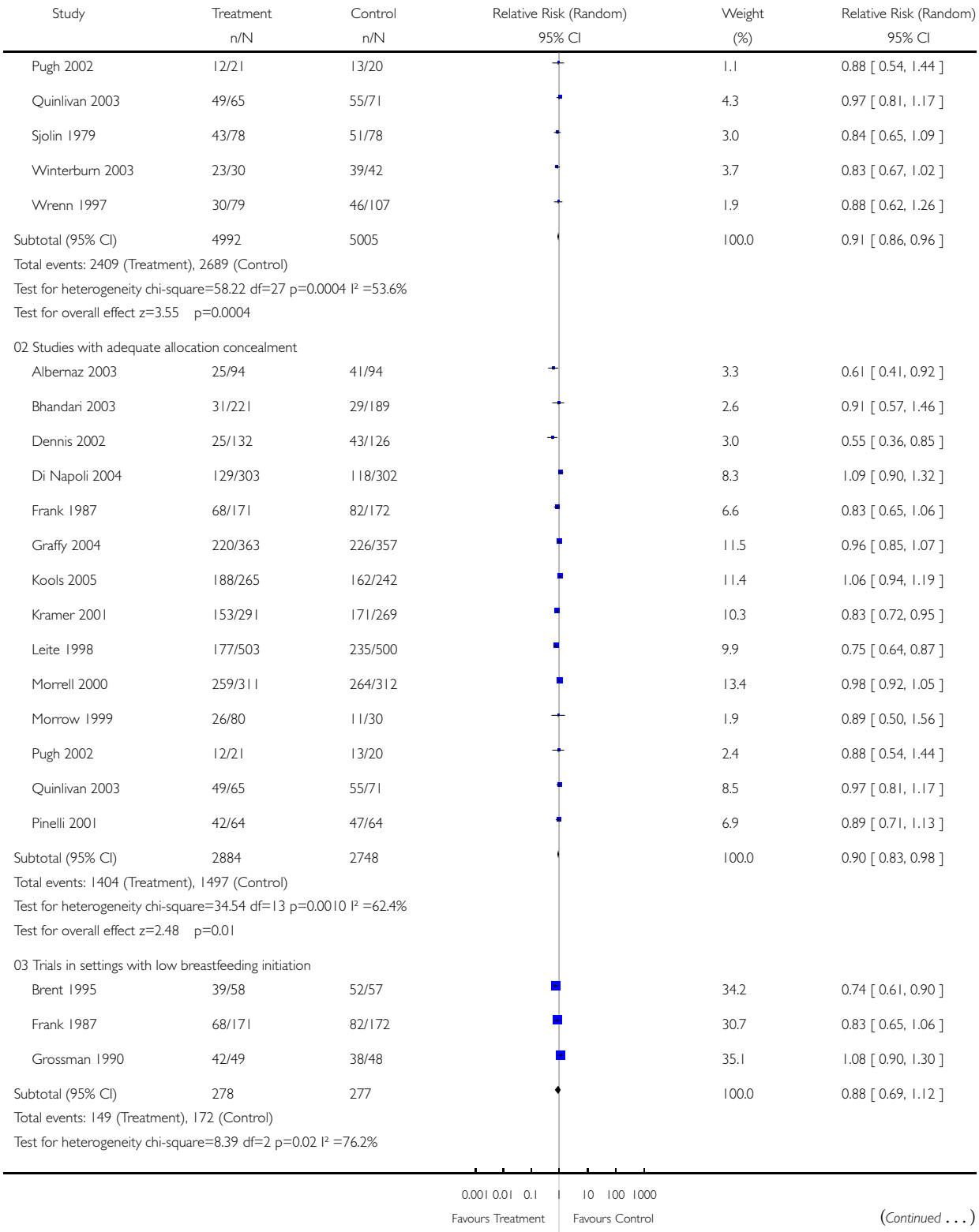

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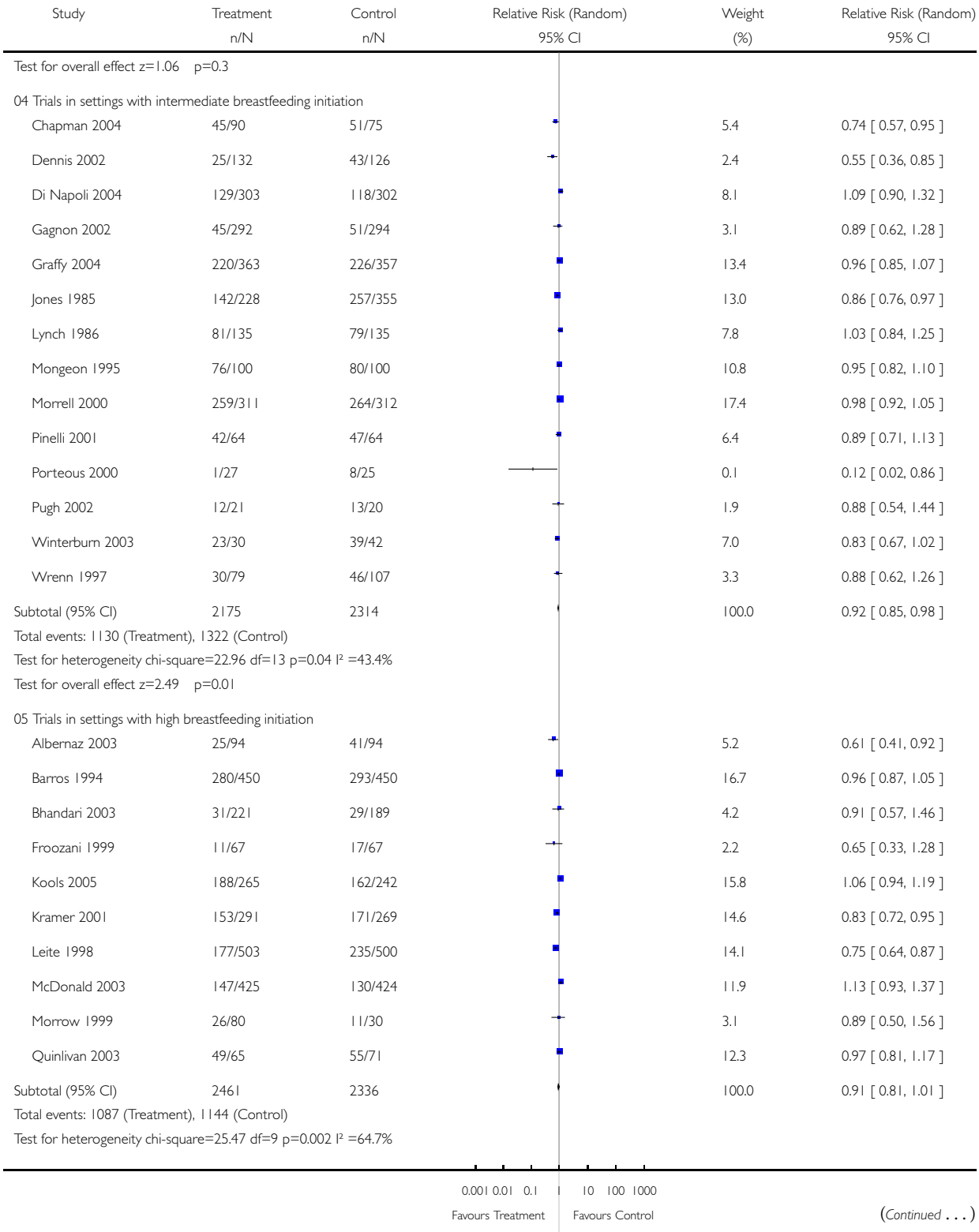

Study	Treatment n/N	Control n/N	Relative Risk (Random) 95% CI	Weight (%)	Relative Risk (Random) 95% CI
Test for overall effect z=1.06 p=0.3					
04 Trials in settings with intermediate breastfeeding initiation					
Chapman 2004	45/90	51/75		5.4	0.74 [0.57, 0.95]
Dennis 2002	25/132	43/126		2.4	0.55 [0.36, 0.85]
Di Napoli 2004	129/303	118/302		8.1	1.09 [0.90, 1.32]
Gagnon 2002	45/292	51/294		3.1	0.89 [0.62, 1.28]
Graffy 2004	220/363	226/357		13.4	0.96 [0.85, 1.07]
Jones 1985	142/228	257/355		13.0	0.86 [0.76, 0.97]
Lynch 1986	81/135	79/135		7.8	1.03 [0.84, 1.25]
Mongeon 1995	76/100	80/100		10.8	0.95 [0.82, 1.10]
Morrell 2000	259/311	264/312		17.4	0.98 [0.92, 1.05]
Pinelli 2001	42/64	47/64		6.4	0.89 [0.71, 1.13]
Porteous 2000	1/27	8/25		0.1	0.12 [0.02, 0.86]
Pugh 2002	12/21	13/20		1.9	0.88 [0.54, 1.44]
Winterburn 2003	23/30	39/42		7.0	0.83 [0.67, 1.02]
Wrenn 1997	30/79	46/107		3.3	0.88 [0.62, 1.26]
Subtotal (95% CI)	2175	2314		100.0	0.92 [0.85, 0.98]
Total events: 1130 (Treatment), 1322 (Control)					
Test for heterogeneity chi-square=22.96 df=13 p=0.04 I^2 =43.4%					
Test for overall effect z=2.49 p=0.01					
05 Trials in settings with high breastfeeding initiation					
Albernaz 2003	25/94	41/94		5.2	0.61 [0.41, 0.92]
Barros 1994	280/450	293/450		16.7	0.96 [0.87, 1.05]
Bhandari 2003	31/221	29/189		4.2	0.91 [0.57, 1.46]
Froozani 1999	11/67	17/67		2.2	0.65 [0.33, 1.28]
Kools 2005	188/265	162/242		15.8	1.06 [0.94, 1.19]
Kramer 2001	153/291	171/269		14.6	0.83 [0.72, 0.95]
Leite 1998	177/503	235/500		14.1	0.75 [0.64, 0.87]
McDonald 2003	147/425	130/424		11.9	1.13 [0.93, 1.37]
Morrow 1999	26/80	11/30		3.1	0.89 [0.50, 1.56]
Quinlivan 2003	49/65	55/71		12.3	0.97 [0.81, 1.17]
Subtotal (95% CI)	2461	2336		100.0	0.91 [0.81, 1.01]
Total events: 1087 (Treatment), 1144 (Control)					
Test for heterogeneity chi-square=25.47 df=9 p=0.002 I^2 =64.7%					

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Study	Treatment n/N	Control n/N	Relative Risk (Random) 95% CI	Weight (%)	Relative Risk (Random) 95% CI
Test for overall effect z=1.79 p=0.07					

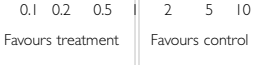
Analysis 02.01. Comparison 02 All forms of support versus usual care, Outcome 01 Stopping exclusive breastfeeding before last study assessment

Review: Support for breastfeeding mothers

Comparison: 02 All forms of support versus usual care

Outcome: 01 Stopping exclusive breastfeeding before last study assessment

Study	Treatment n/N	Control n/N	Relative Risk (Random) 95% CI	Weight (%)	Relative Risk (Random) 95% CI
Albernaz 2003	61/94	71/94		5.2	0.86 [0.71, 1.04]
Bhandari 2003	68/221	110/189		4.6	0.53 [0.42, 0.67]
Frank 1987	162/171	161/172		6.7	1.01 [0.96, 1.07]
Froozani 1999	35/67	63/67		4.6	0.56 [0.44, 0.70]
Gagnon 2002	109/292	123/294		5.1	0.89 [0.73, 1.09]
Graffy 2004	260/363	271/357		6.4	0.94 [0.86, 1.03]
Haider 2000	101/227	346/363		5.8	0.47 [0.40, 0.54]
Jenner 1988	6/19	15/19		1.3	0.40 [0.20, 0.81]
Kools 2005	201/265	175/242		6.3	1.05 [0.95, 1.16]
Kramer 2001	244/262	240/242		6.8	0.94 [0.91, 0.97]
Leite 1998	379/503	403/500		6.6	0.93 [0.88, 1.00]
McDonald 2003	237/425	240/424		6.1	0.99 [0.87, 1.11]
Moore 1985	192/250	210/275		6.4	1.01 [0.91, 1.11]
Morrell 2000	278/311	284/312		6.7	0.98 [0.93, 1.03]
Morrow 1999	36/80	26/30		4.0	0.52 [0.39, 0.69]
Porteous 2000	5/27	16/25		0.9	0.29 [0.12, 0.67]
Pugh 2002	15/21	17/20		3.5	0.84 [0.61, 1.17]
Santiago 2003	17/68	23/33		2.3	0.36 [0.22, 0.57]
Sjolin 1979	65/79	67/79		5.9	0.97 [0.84, 1.11]
Wrenn 1997	50/79	70/107		4.8	0.97 [0.78, 1.20]



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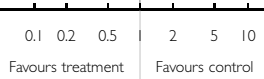
Study	Treatment n/N	Control n/N	Relative Risk (Random) 95% CI	Weight (%)	Relative Risk (Random) 95% CI
Total (95% CI)	3824	3844		100.0	0.81 [0.74, 0.89]
Total events: 2521 (Treatment), 2931 (Control)					
Test for heterogeneity chi-square=243.29 df=19 p=<0.0001 I^2 =92.2%					
Test for overall effect z=4.63 p<0.00001					



Analysis 03.01. Comparison 03 All forms of support versus usual care, Outcome 01 Stopping any breastfeeding at different times

Review: Support for breastfeeding mothers

Comparison: 03 All forms of support versus usual care

Outcome: 01 Stopping any breastfeeding at different times

Study	Treatment n/N	Control n/N	Relative Risk (Random) 95% CI	Weight (%)	Relative Risk (Random) 95% CI
01 Before 4 to 6 weeks					
Barros 1994	85/450	131/450		10.1	0.65 [0.51, 0.82]
Chapman 2004	30/90	36/75		6.6	0.69 [0.48, 1.01]
Dennis 2002	10/132	22/126		2.6	0.43 [0.21, 0.88]
Di Napoli 2004	95/303	91/302		10.1	1.04 [0.82, 1.32]
Gagnon 2002	45/292	51/294		6.7	0.89 [0.62, 1.28]
Graffy 2004	145/363	144/357		12.2	0.99 [0.83, 1.18]
Grossman 1990	20/49	16/48		4.2	1.22 [0.73, 2.07]
Mongeon 1995	32/100	20/100		4.7	1.60 [0.99, 2.60]
Morrell 2000	185/311	199/312		13.9	0.93 [0.82, 1.06]
Pinelli 2001	28/64	30/64		6.4	0.93 [0.64, 1.37]
Porteous 2000	1/27	8/25		0.4	0.12 [0.02, 0.86]
Quinlivan 2003	25/65	33/71		6.1	0.83 [0.56, 1.23]
Winterburn 2003	20/30	36/42		8.9	0.78 [0.59, 1.03]
Wrenn 1997	30/79	46/107		7.0	0.88 [0.62, 1.26]
Subtotal (95% CI)	2355	2373		100.0	0.88 [0.78, 1.00]
Total events: 751 (Treatment), 863 (Control)					
Test for heterogeneity chi-square=28.06 df=13 p=0.009 I^2 =53.7%					
Test for overall effect z=2.03 p=0.04					

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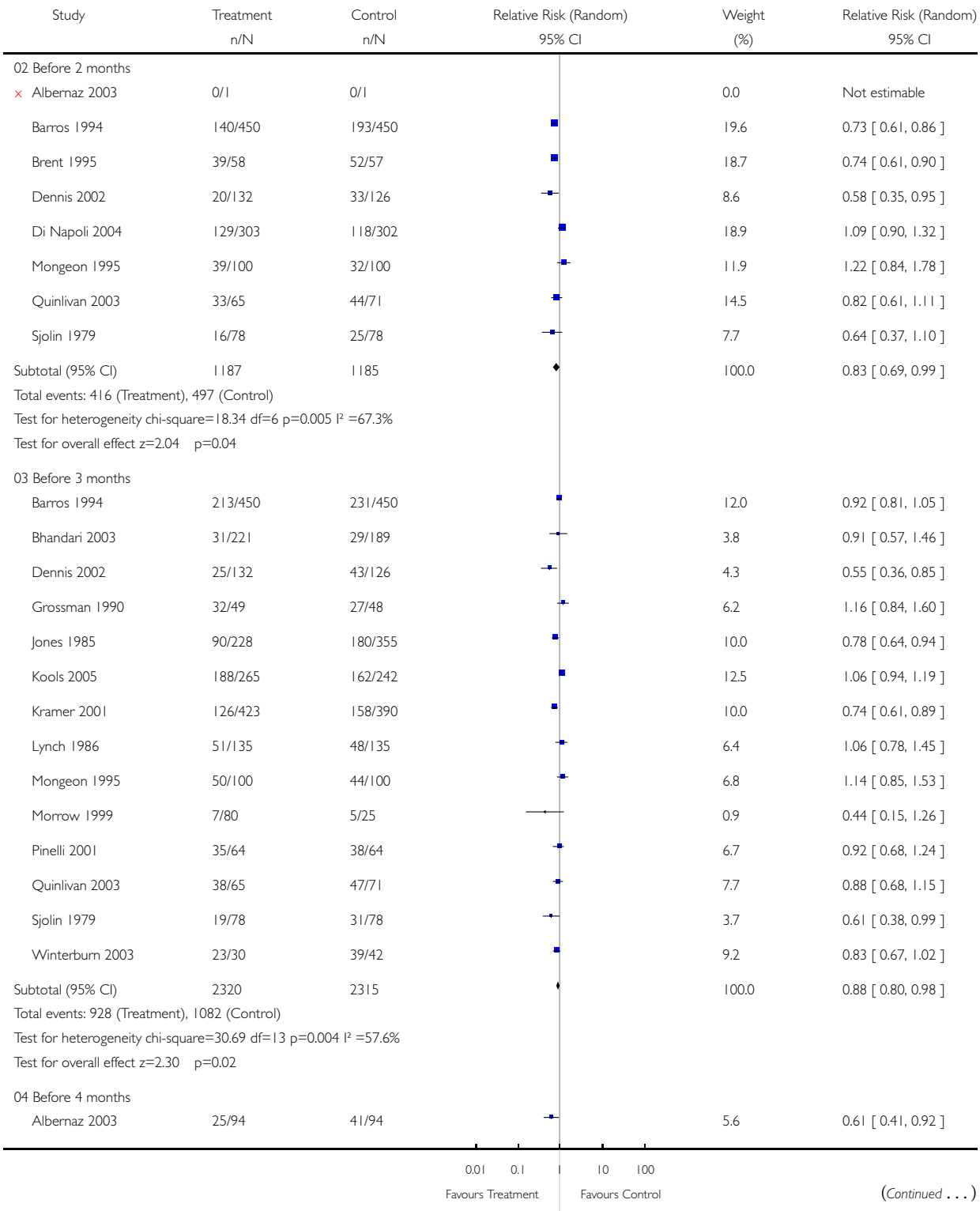

Study	Treatment n/N	Control n/N	Relative Risk (Random) 95% CI	Weight (%)	Relative Risk (Random) 95% CI
02 Before 2 months					
× Albernaz 2003	0/1	0/1		0.0	Not estimable
Barros 1994	140/450	193/450		19.6	0.73 [0.61, 0.86]
Brent 1995	39/58	52/57		18.7	0.74 [0.61, 0.90]
Dennis 2002	20/132	33/126		8.6	0.58 [0.35, 0.95]
Di Napoli 2004	129/303	118/302		18.9	1.09 [0.90, 1.32]
Mongeon 1995	39/100	32/100		11.9	1.22 [0.84, 1.78]
Quinlivan 2003	33/65	44/71		14.5	0.82 [0.61, 1.11]
Sjolin 1979	16/78	25/78		7.7	0.64 [0.37, 1.10]
Subtotal (95% CI)	1187	1185		100.0	0.83 [0.69, 0.99]
Total events: 416 (Treatment), 497 (Control)					
Test for heterogeneity chi-square=18.34 df=6 p=0.005 I^2 =67.3%					
Test for overall effect z=2.04 p=0.04					
03 Before 3 months					
Barros 1994	213/450	231/450		12.0	0.92 [0.81, 1.05]
Bhandari 2003	31/221	29/189		3.8	0.91 [0.57, 1.46]
Dennis 2002	25/132	43/126		4.3	0.55 [0.36, 0.85]
Grossman 1990	32/49	27/48		6.2	1.16 [0.84, 1.60]
Jones 1985	90/228	180/355		10.0	0.78 [0.64, 0.94]
Kools 2005	188/265	162/242		12.5	1.06 [0.94, 1.19]
Kramer 2001	126/423	158/390		10.0	0.74 [0.61, 0.89]
Lynch 1986	51/135	48/135		6.4	1.06 [0.78, 1.45]
Mongeon 1995	50/100	44/100		6.8	1.14 [0.85, 1.53]
Morrow 1999	7/80	5/25		0.9	0.44 [0.15, 1.26]
Pinelli 2001	35/64	38/64		6.7	0.92 [0.68, 1.24]
Quinlivan 2003	38/65	47/71		7.7	0.88 [0.68, 1.15]
Sjolin 1979	19/78	31/78		3.7	0.61 [0.38, 0.99]
Winterburn 2003	23/30	39/42		9.2	0.83 [0.67, 1.02]
Subtotal (95% CI)	2320	2315		100.0	0.88 [0.80, 0.98]
Total events: 928 (Treatment), 1082 (Control)					
Test for heterogeneity chi-square=30.69 df=13 p=0.004 I^2 =57.6%					
Test for overall effect z=2.30 p=0.02					
04 Before 4 months					
Albernaz 2003	25/94	41/94		5.6	0.61 [0.41, 0.92]

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Study	Treatment n/N	Control n/N	Relative Risk (Random) 95% CI	Weight (%)	Relative Risk (Random) 95% CI
Barros 1994	251/450	264/450		18.5	0.95 [0.85, 1.06]
Frank 1987	68/171	82/172		10.9	0.83 [0.65, 1.06]
Froozani 1999	11/67	17/67		2.4	0.65 [0.33, 1.28]
Graffy 2004	220/363	226/357		18.4	0.96 [0.85, 1.07]
Leite 1998	177/503	235/500		16.1	0.75 [0.64, 0.87]
Mongeon 1995	59/100	52/100		10.6	1.13 [0.88, 1.46]
Quinlivan 2003	41/65	50/71		11.1	0.90 [0.70, 1.14]
Sjolin 1979	27/78	41/78		6.4	0.66 [0.45, 0.95]
Subtotal (95% CI)	1891	1889		100.0	0.86 [0.77, 0.96]
Total events: 879 (Treatment), 1008 (Control)					
Test for heterogeneity chi-square=19.13 df=8 p=0.01 I^2 =58.2%					
Test for overall effect z=2.61 p=0.009					
05 Before 6 months					
Barros 1994	280/450	293/450		17.0	0.96 [0.87, 1.05]
Grossman 1990	42/49	38/48		5.4	1.08 [0.90, 1.30]
Jones 1985	142/228	257/355		12.1	0.86 [0.76, 0.97]
Kramer 2001	153/291	171/269		8.9	0.83 [0.72, 0.95]
Lynch 1986	81/135	79/135		4.7	1.03 [0.84, 1.25]
Mongeon 1995	76/100	80/100		8.3	0.95 [0.82, 1.10]
Morrell 2000	259/311	264/312		30.5	0.98 [0.92, 1.05]
Morrow 1999	26/80	11/30		0.6	0.89 [0.50, 1.56]
Pinelli 2001	42/64	47/64		3.5	0.89 [0.71, 1.13]
Pugh 2002	12/21	13/20		0.8	0.88 [0.54, 1.44]
Quinlivan 2003	49/65	55/71		5.3	0.97 [0.81, 1.17]
Sjolin 1979	43/78	51/78		2.9	0.84 [0.65, 1.09]
Subtotal (95% CI)	1872	1932		100.0	0.94 [0.90, 0.99]
Total events: 1205 (Treatment), 1359 (Control)					
Test for heterogeneity chi-square=11.80 df=11 p=0.38 I^2 =6.8%					
Test for overall effect z=2.61 p=0.009					
06 Before 9 months					
Kramer 2001	189/287	201/265		73.3	0.87 [0.78, 0.97]
Quinlivan 2003	49/65	55/71		26.7	0.97 [0.81, 1.17]
Subtotal (95% CI)	352	336		100.0	0.90 [0.81, 0.99]
Total events: 238 (Treatment), 256 (Control)					
Test for heterogeneity chi-square=1.08 df=1 p=0.30 I^2 =7.5%					

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Study	Treatment n/N	Control n/N	Relative Risk (Random) 95% CI	Weight (%)	Relative Risk (Random) 95% CI
Test for overall effect z=2.19 p=0.03					
07 Before 12 months					
Jones 1985	219/228	330/355		39.9	1.03 [0.99, 1.07]
Kramer 2001	402/483	400/446		37.9	0.93 [0.88, 0.98]
Pinelli 2001	56/64	55/64		22.2	1.02 [0.89, 1.17]
Subtotal (95% CI)	775	865		100.0	0.99 [0.90, 1.08]
Total events: 677 (Treatment), 785 (Control)					
Test for heterogeneity chi-square=13.11 df=2 p=0.001 I² =84.7%					
Test for overall effect z=0.24 p=0.8					

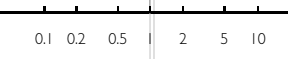
Analysis 03.02. Comparison 03 All forms of support versus usual care, Outcome 02 Stopping exclusive breastfeeding at different times

Review: Support for breastfeeding mothers

Comparison: 03 All forms of support versus usual care

Outcome: 02 Stopping exclusive breastfeeding at different times

Study	Treatment n/N	Control n/N	Relative Risk (Random) 95% CI	Weight (%)	Relative Risk (Random) 95% CI
01 Before 4 to 6 weeks					
Frank 1987	74/171	87/172		11.5	0.86 [0.68, 1.07]
Froozani 1999	12/67	39/67		7.2	0.31 [0.18, 0.53]
Gagnon 2002	109/292	123/294		11.8	0.89 [0.73, 1.09]
Graffy 2004	260/363	271/357		12.8	0.94 [0.86, 1.03]
Haider 2000	52/202	266/363		11.3	0.35 [0.28, 0.45]
Morrell 2000	224/311	240/312		12.8	0.94 [0.85, 1.03]
Morrow 1999	32/80	21/30		9.7	0.57 [0.40, 0.82]
Porteous 2000	5/27	16/25		4.5	0.29 [0.12, 0.67]
Sjolin 1979	14/78	22/78		6.7	0.64 [0.35, 1.15]
Wrenn 1997	50/79	70/107		11.6	0.97 [0.78, 1.20]
Subtotal (95% CI)	1670	1805		100.0	0.67 [0.54, 0.84]
Total events: 832 (Treatment), 1155 (Control)					
Test for heterogeneity chi-square=102.11 df=9 p=<0.0001 I² =91.2%					



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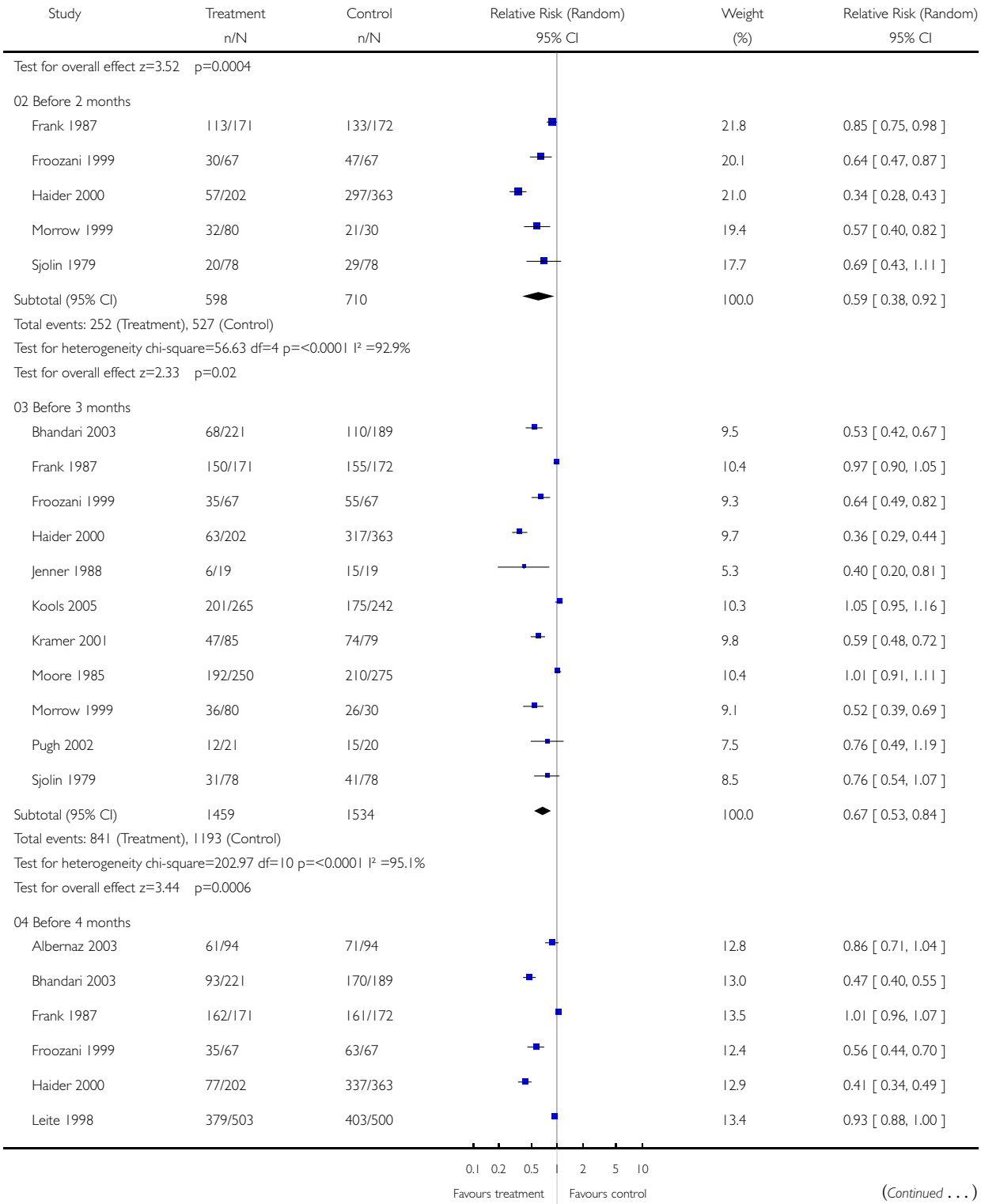

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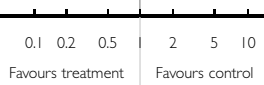
Study	Treatment n/N	Control n/N	Relative Risk (Random) 95% CI	Weight (%)	Relative Risk (Random) 95% CI
Santiago 2003	17/68	23/33		10.0	0.36 [0.22, 0.57]
Sjolin 1979	40/78	50/78		12.1	0.80 [0.61, 1.05]
Subtotal (95% CI)	1404	1496		100.0	0.64 [0.48, 0.86]
Total events: 864 (Treatment), 1278 (Control)					
Test for heterogeneity chi-square=296.58 df=7 p=<0.0001 I^2 =97.6%					
Test for overall effect z=2.99 p=0.003					
05 Before 5 months					
Haider 2000	101/227	346/363		100.0	0.47 [0.40, 0.54]
Subtotal (95% CI)	227	363		100.0	0.47 [0.40, 0.54]
Total events: 101 (Treatment), 346 (Control)					
Test for heterogeneity: not applicable					
Test for overall effect z=10.15 p<0.00001					
06 Before 6 months					
Bhandari 2003	144/221	183/189		18.1	0.67 [0.61, 0.74]
Kramer 2001	244/262	240/242		21.1	0.94 [0.91, 0.97]
McDonald 2003	237/425	240/424		17.0	0.99 [0.87, 1.11]
Morrell 2000	278/311	284/312		20.6	0.98 [0.93, 1.03]
Pugh 2002	15/21	17/20		7.0	0.84 [0.61, 1.17]
Sjolin 1979	65/78	67/78		16.1	0.97 [0.85, 1.11]
Subtotal (95% CI)	1318	1265		100.0	0.90 [0.81, 1.00]
Total events: 983 (Treatment), 1031 (Control)					
Test for heterogeneity chi-square=48.94 df=5 p=<0.0001 I^2 =89.8%					
Test for overall effect z=2.01 p=0.04					



Analysis 04.01. Comparison 04 Professional support versus usual care, Outcome 01 Stopping any breastfeeding before last study assessment up to 6 months

Review: Support for breastfeeding mothers

Comparison: 04 Professional support versus usual care

Outcome: 01 Stopping any breastfeeding before last study assessment up to 6 months

Study	Treatment n/N	Control n/N	Relative Risk (Random) 95% CI	Weight (%)	Relative Risk (Random) 95% CI
Albernaz 2003	25/94	41/94		2.9	0.61 [0.41, 0.92]
Di Napoli 2004	129/303	118/302		7.7	1.09 [0.90, 1.32]
Frank 1987	68/171	82/172		6.1	0.83 [0.65, 1.06]
Froozani 1999	11/67	17/67		1.2	0.65 [0.33, 1.28]
Gagnon 2002	45/292	51/294		3.4	0.89 [0.62, 1.28]
Grossman 1990	42/49	38/48		8.0	1.08 [0.90, 1.30]
Jones 1985	142/228	257/355		10.9	0.86 [0.76, 0.97]
Kools 2005	188/265	162/242		11.0	1.06 [0.94, 1.19]
Kramer 2001	153/291	171/269		9.9	0.83 [0.72, 0.95]
Lynch 1986	81/135	79/135		7.5	1.03 [0.84, 1.25]
McDonald 2003	147/425	130/424		7.7	1.13 [0.93, 1.37]
Pinelli 2001	42/64	47/64		6.4	0.89 [0.71, 1.13]
Porteous 2000	1/27	8/25		0.1	0.12 [0.02, 0.86]
Quinlivan 2003	49/65	55/71		7.9	0.97 [0.81, 1.17]
Sjolin 1979	43/78	51/78		5.6	0.84 [0.65, 1.09]
Wrenn 1997	30/79	46/107		3.6	0.88 [0.62, 1.26]
Total (95% CI)	2633	2747		100.0	0.94 [0.87, 1.01]
Total events: 1196 (Treatment), 1353 (Control)					
Test for heterogeneity chi-square=29.88 df=15 p=0.01 I^2 =49.8%					
Test for overall effect z=1.66 p=0.1					

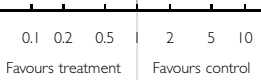
Analysis 04.02. Comparison 04 Professional support versus usual care, Outcome 02 Stopping exclusive breastfeeding before last study assessment

Review: Support for breastfeeding mothers

Comparison: 04 Professional support versus usual care

Outcome: 02 Stopping exclusive breastfeeding before last study assessment

Study	Treatment n/N	Control n/N	Relative Risk (Random) 95% CI	Weight (%)	Relative Risk (Random) 95% CI
Albernaz 2003	61/94	71/94		7.7	0.86 [0.71, 1.04]
Frank 1987	162/171	161/172		13.0	1.01 [0.96, 1.07]
Froozani 1999	35/67	63/67		6.1	0.56 [0.44, 0.70]
Gagnon 2002	109/292	123/294		7.2	0.89 [0.73, 1.09]
Kools 2005	201/265	175/242		11.1	1.05 [0.95, 1.16]
Kramer 2001	244/262	240/242		13.4	0.94 [0.91, 0.97]
McDonald 2003	237/425	240/424		10.5	0.99 [0.87, 1.11]
Moore 1985	192/250	210/275		11.5	1.01 [0.91, 1.11]
Porteous 2000	5/27	16/25		0.8	0.29 [0.12, 0.67]
Santiago 2003	17/68	23/33		2.3	0.36 [0.22, 0.57]
Sjolin 1979	65/79	67/79		9.6	0.97 [0.84, 1.11]
Wrenn 1997	50/79	70/107		6.7	0.97 [0.78, 1.20]
Total (95% CI)	2079	2054		100.0	0.91 [0.84, 0.98]
Total events: 1378 (Treatment), 1459 (Control)					
Test for heterogeneity chi-square=59.55 df=11 p=<0.0001 I^2 =81.5%					
Test for overall effect z=2.43 p=0.01					



Analysis 05.01. Comparison 05 Lay support versus usual care, Outcome 01 Stopping any breastfeeding before last study assessment

Review: Support for breastfeeding mothers

Comparison: 05 Lay support versus usual care

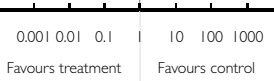
Outcome: 01 Stopping any breastfeeding before last study assessment

Study	Treatment n/N	Control n/N	Relative Risk (Random) 95% CI	Weight (%)	Relative Risk (Random) 95% CI
Chapman 2004	45/90	51/75		12.0	0.74 [0.57, 0.95]
Dennis 2002	25/132	43/126		6.5	0.55 [0.36, 0.85]
Graffy 2004	220/363	226/357		19.7	0.96 [0.85, 1.07]
Leite 1998	177/503	235/500		17.7	0.75 [0.64, 0.87]
Mongeon 1995	76/100	80/100		17.9	0.95 [0.82, 1.10]
Morrell 2000	259/311	264/312		22.0	0.98 [0.92, 1.05]
Morrow 1999	26/80	11/30		4.2	0.89 [0.50, 1.56]
Total (95% CI)	1579	1500		100.0	0.86 [0.76, 0.98]

Total events: 828 (Treatment), 910 (Control)

Test for heterogeneity chi-square=24.56 df=6 p=0.0004 I^2 =75.6%

Test for overall effect z=2.33 p=0.02



Analysis 05.02. Comparison 05 Lay support versus usual care, Outcome 02 Stopping exclusive breastfeeding before last study assessment

Review: Support for breastfeeding mothers

Comparison: 05 Lay support versus usual care

Outcome: 02 Stopping exclusive breastfeeding before last study assessment

Study	Treatment n/N	Control n/N	Relative Risk (Random) 95% CI	Weight (%)	Relative Risk (Random) 95% CI
Graffy 2004	260/363	271/357		19.6	0.94 [0.86, 1.03]
Haider 2000	101/227	346/363		18.6	0.47 [0.40, 0.54]
Jenner 1988	6/19	15/19		6.7	0.40 [0.20, 0.81]
Leite 1998	379/503	403/500		19.9	0.93 [0.88, 1.00]
Morrell 2000	278/311	284/312		20.0	0.98 [0.93, 1.03]
Morrow 1999	36/80	26/30		15.3	0.52 [0.39, 0.69]
Total (95% CI)	1503	1581		100.0	0.72 [0.57, 0.90]

Total events: 1060 (Treatment), 1345 (Control)

Test for heterogeneity chi-square=134.28 df=5 p=<0.0001 I^2 =96.3%

Test for overall effect z=2.92 p=0.003

Analysis 06.01. Comparison 06 Professional support versus usual care, Outcome 01 Stopping any breastfeeding at different times

Review: Support for breastfeeding mothers

Comparison: 06 Professional support versus usual care

Outcome: 01 Stopping any breastfeeding at different times

Study	Treatment n/N	Control n/N	Relative Risk (Random) 95% CI	Weight (%)	Relative Risk (Random) 95% CI
01 Before 4 to 6 weeks					
Di Napoli 2004	95/303	91/302		18.5	1.04 [0.82, 1.32]
Gagnon 2002	45/292	51/294		13.3	0.89 [0.62, 1.28]
Grossman 1990	20/49	16/48		8.9	1.22 [0.73, 2.07]
Jones 1985	37/228	100/355		14.4	0.58 [0.41, 0.81]
Pinelli 2001	28/64	30/64		12.8	0.93 [0.64, 1.37]
Porteous 2000	1/27	8/25		0.9	0.12 [0.02, 0.86]
Quinlivan 2003	25/65	33/71		12.3	0.83 [0.56, 1.23]
Sjolin 1979	9/78	16/78		5.2	0.56 [0.26, 1.20]
Wrenn 1997	30/79	46/107		13.7	0.88 [0.62, 1.26]
Subtotal (95% CI)	1185	1344		100.0	0.85 [0.70, 1.02]
Total events: 290 (Treatment), 391 (Control)					
Test for heterogeneity chi-square=15.14 df=8 p=0.06 I^2 =47.2%					
Test for overall effect z=1.71 p=0.09					
02 Before 2 months					
Di Napoli 2004	129/303	118/302		46.1	1.09 [0.90, 1.32]
Quinlivan 2003	33/65	44/71		35.3	0.82 [0.61, 1.11]
Sjolin 1979	16/78	25/78		18.7	0.64 [0.37, 1.10]
Subtotal (95% CI)	446	451		100.0	0.89 [0.67, 1.19]
Total events: 178 (Treatment), 187 (Control)					
Test for heterogeneity chi-square=4.87 df=2 p=0.09 I^2 =58.9%					
Test for overall effect z=0.79 p=0.4					
03 Before 3 months					
Grossman 1990	32/49	27/48		10.3	1.16 [0.84, 1.60]
Jones 1985	90/228	180/355		15.4	0.78 [0.64, 0.94]
Kools 2005	188/265	162/242		18.3	1.06 [0.94, 1.19]
Kramer 2001	126/423	158/390		15.4	0.74 [0.61, 0.89]
Lynch 1986	51/135	48/135		10.6	1.06 [0.78, 1.45]
Pinelli 2001	35/64	38/64		11.0	0.92 [0.68, 1.24]

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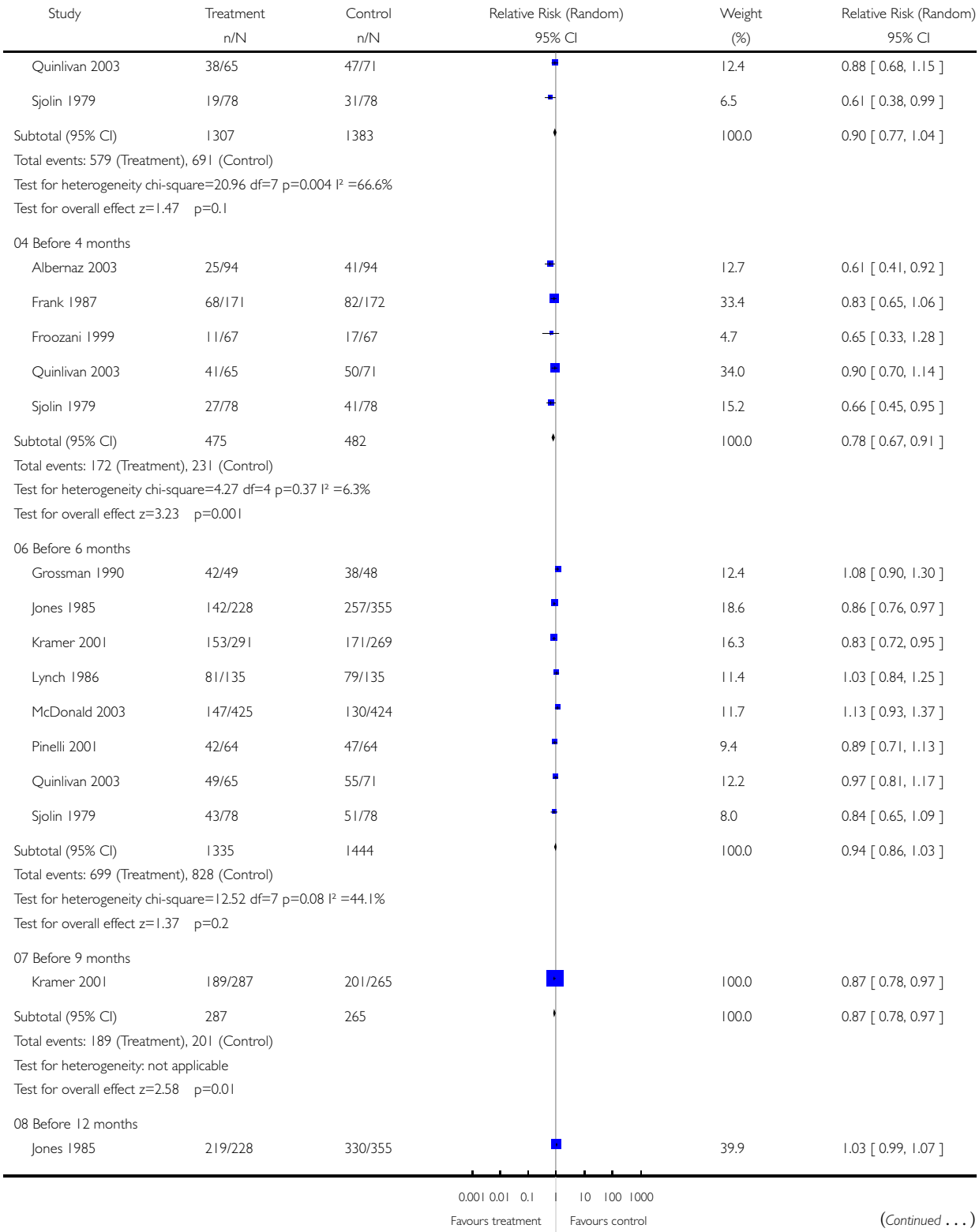

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Study	Treatment n/N	Control n/N	Relative Risk (Random) 95% CI	Weight (%)	Relative Risk (Random) 95% CI
Kramer 2001	402/483	400/446		37.9	0.93 [0.88, 0.98]
Pinelli 2001	56/64	55/64		22.2	1.02 [0.89, 1.17]
Subtotal (95% CI)	775	865		100.0	0.99 [0.90, 1.08]
Total events: 677 (Treatment), 785 (Control)					
Test for heterogeneity chi-square=13.11 df=2 p=0.001 I^2 =84.7%					
Test for overall effect z=0.24 p=0.8					

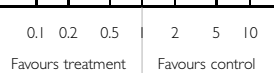
Analysis 06.02. Comparison 06 Professional support versus usual care, Outcome 02 Stopping exclusive breastfeeding at different times

Review: Support for breastfeeding mothers

Comparison: 06 Professional support versus usual care

Outcome: 02 Stopping exclusive breastfeeding at different times

Study	Treatment n/N	Control n/N	Relative Risk (Random) 95% CI	Weight (%)	Relative Risk (Random) 95% CI
01 Before 4 to 6 weeks					
Frank 1987	74/171	87/172		21.9	0.86 [0.68, 1.07]
Froozani 1999	12/67	39/67		13.2	0.31 [0.18, 0.53]
Gagnon 2002	109/292	123/294		22.5	0.89 [0.73, 1.09]
Porteous 2000	5/27	16/25		8.0	0.29 [0.12, 0.67]
Sjolin 1979	14/78	22/78		12.3	0.64 [0.35, 1.15]
Wrenn 1997	50/79	70/107		22.1	0.97 [0.78, 1.20]
Subtotal (95% CI)	714	743		100.0	0.69 [0.51, 0.92]
Total events: 264 (Treatment), 357 (Control)					
Test for heterogeneity chi-square=22.62 df=5 p=0.0004 I^2 =77.9%					
Test for overall effect z=2.56 p=0.01					
02 Before 2 months					
Frank 1987	113/171	133/172		55.6	0.85 [0.75, 0.98]
Froozani 1999	30/67	47/67		28.7	0.64 [0.47, 0.87]
Sjolin 1979	20/78	29/78		15.7	0.69 [0.43, 1.11]
Subtotal (95% CI)	316	317		100.0	0.76 [0.61, 0.94]
Total events: 163 (Treatment), 209 (Control)					
Test for heterogeneity chi-square=3.59 df=2 p=0.17 I^2 =44.3%					



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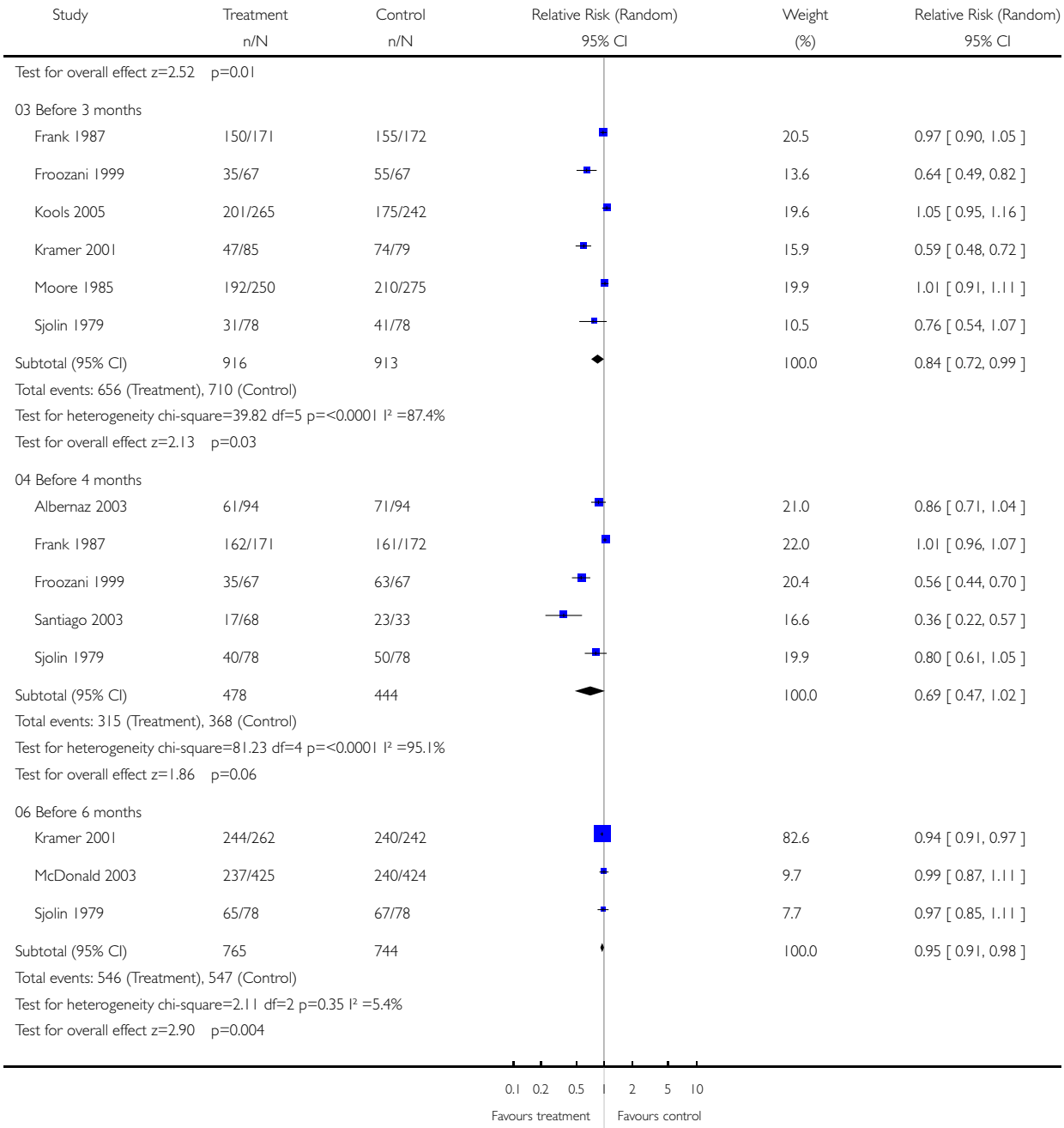


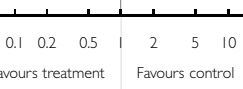
Analysis 07.01. Comparison 07 Lay support versus usual care, Outcome 01 Stopping any breastfeeding at different times

Review: Support for breastfeeding mothers

Comparison: 07 Lay support versus usual care

Outcome: 01 Stopping any breastfeeding at different times

Study	Treatment n/N	Control n/N	Relative Risk (Random) 95% CI	Weight (%)	Relative Risk (Random) 95% CI
01 Before 4 to 6 weeks					
Chapman 2004	30/90	36/75		17.5	0.69 [0.48, 1.01]
Dennis 2002	10/132	22/126		7.6	0.43 [0.21, 0.88]
Graffy 2004	145/363	144/357		29.3	0.99 [0.83, 1.18]
Mongeon 1995	32/100	20/100		13.0	1.60 [0.99, 2.60]
Morrell 2000	185/311	199/312		32.6	0.93 [0.82, 1.06]
Subtotal (95% CI)	996	970		100.0	0.91 [0.73, 1.14]
Total events: 402 (Treatment), 421 (Control)					
Test for heterogeneity chi-square=12.06 df=4 p=0.02 I^2 =66.8%					
Test for overall effect z=0.82 p=0.4					
02 Before 2 months					
Dennis 2002	20/132	33/126		47.5	0.58 [0.35, 0.95]
Mongeon 1995	39/100	32/100		52.5	1.22 [0.84, 1.78]
Subtotal (95% CI)	232	226		100.0	0.86 [0.41, 1.78]
Total events: 59 (Treatment), 65 (Control)					
Test for heterogeneity chi-square=5.54 df=1 p=0.02 I^2 =82.0%					
Test for overall effect z=0.42 p=0.7					
03 Before 3 months					
Chapman 2004	45/90	51/75		33.8	0.74 [0.57, 0.95]
Dennis 2002	25/132	43/126		25.6	0.55 [0.36, 0.85]
Mongeon 1995	50/100	44/100		32.0	1.14 [0.85, 1.53]
Morrow 1999	7/80	5/30		8.6	0.53 [0.18, 1.53]
Subtotal (95% CI)	402	331		100.0	0.76 [0.54, 1.09]
Total events: 127 (Treatment), 143 (Control)					
Test for heterogeneity chi-square=9.29 df=3 p=0.03 I^2 =67.7%					
Test for overall effect z=1.50 p=0.1					
04 Before 4 months					
Graffy 2004	220/363	226/357		37.9	0.96 [0.85, 1.07]
Leite 1998	177/503	235/500		35.1	0.75 [0.64, 0.87]
Mongeon 1995	59/100	52/100		27.0	1.13 [0.88, 1.46]



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Study	Treatment n/N	Control n/N	Relative Risk (Random) 95% CI	Weight (%)	Relative Risk (Random) 95% CI
Subtotal (95% CI)	966	957		100.0	0.92 [0.74, 1.14]
Total events: 456 (Treatment), 513 (Control)					
Test for heterogeneity chi-square=10.49 df=2 p=0.005 I² =80.9%					
Test for overall effect z=0.76 p=0.4					
06 Before 6 months					
Mongeon 1995	76/100	80/100		17.6	0.95 [0.82, 1.10]
Morrell 2000	259/311	264/312		81.2	0.98 [0.92, 1.05]
Morrow 1999	26/80	11/30		1.2	0.89 [0.50, 1.56]
Subtotal (95% CI)	491	442		100.0	0.98 [0.92, 1.04]
Total events: 361 (Treatment), 355 (Control)					
Test for heterogeneity chi-square=0.32 df=2 p=0.85 I² =0.0%					
Test for overall effect z=0.74 p=0.5					

Analysis 07.02. Comparison 07 Lay support versus usual care, Outcome 02 Stopping exclusive breastfeeding at different times

Review: Support for breastfeeding mothers

Comparison: 07 Lay support versus usual care

Outcome: 02 Stopping exclusive breastfeeding at different times

Study	Treatment n/N	Control n/N	Relative Risk (Random) 95% CI	Weight (%)	Relative Risk (Random) 95% CI
01 Before 4 to 6 weeks					
Graffy 2004	260/363	271/357		27.0	0.94 [0.86, 1.03]
Haider 2000	52/202	266/363		24.4	0.35 [0.28, 0.45]
Morrell 2000	224/311	240/312		26.9	0.94 [0.85, 1.03]
Morrow 1999	32/80	21/30		21.7	0.57 [0.40, 0.82]
Subtotal (95% CI)	956	1062		100.0	0.66 [0.46, 0.96]
Total events: 568 (Treatment), 798 (Control)					
Test for heterogeneity chi-square=80.43 df=3 p=<0.0001 I² =96.3%					
Test for overall effect z=2.20 p=0.03					
02 Before 2 months					
Haider 2000	57/202	297/363		53.6	0.34 [0.28, 0.43]
Morrow 1999	32/80	21/30		46.4	0.57 [0.40, 0.82]

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Study	Treatment n/N	Control n/N	Relative Risk (Random) 95% CI	Weight (%)	Relative Risk (Random) 95% CI
Subtotal (95% CI)	282	393		100.0	0.44 [0.26, 0.73]
Total events: 89 (Treatment), 318 (Control)					
Test for heterogeneity chi-square=5.96 df=1 p=0.01 I^2 =83.2%					
Test for overall effect z=3.17 p=0.002					
03 Before 3 months					
Haider 2000	63/202	317/363		46.2	0.36 [0.29, 0.44]
Jenner 1988	6/19	15/19		14.3	0.40 [0.20, 0.81]
Morrow 1999	36/80	26/30		39.4	0.52 [0.39, 0.69]
Subtotal (95% CI)	301	412		100.0	0.42 [0.31, 0.57]
Total events: 105 (Treatment), 358 (Control)					
Test for heterogeneity chi-square=5.06 df=2 p=0.08 I^2 =60.5%					
Test for overall effect z=5.56 p<0.00001					
04 Before 4 months					
Haider 2000	77/202	337/363		49.6	0.41 [0.34, 0.49]
Leite 1998	379/503	403/500		50.4	0.93 [0.88, 1.00]
Subtotal (95% CI)	705	863		100.0	0.62 [0.25, 1.53]
Total events: 456 (Treatment), 740 (Control)					
Test for heterogeneity chi-square=90.68 df=1 p=<0.0001 I^2 =98.9%					
Test for overall effect z=1.03 p=0.3					
05 Before 5 months					
Haider 2000	101/227	346/363		100.0	0.47 [0.40, 0.54]
Subtotal (95% CI)	227	363		100.0	0.47 [0.40, 0.54]
Total events: 101 (Treatment), 346 (Control)					
Test for heterogeneity: not applicable					
Test for overall effect z=10.15 p<0.00001					
06 Before 6 months					
Morrell 2000	278/311	284/312		100.0	0.98 [0.93, 1.03]
Subtotal (95% CI)	311	312		100.0	0.98 [0.93, 1.03]
Total events: 278 (Treatment), 284 (Control)					
Test for heterogeneity: not applicable					
Test for overall effect z=0.69 p=0.5					

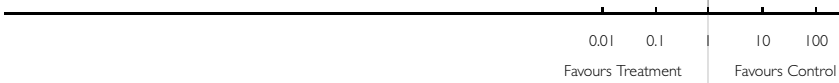
Analysis 08.01. Comparison 08 Differing modes of support versus usual care, Outcome 01 Stopping any breastfeeding before last study assessment up to 6 months

Review: Support for breastfeeding mothers

Comparison: 08 Differing modes of support versus usual care

Outcome: 01 Stopping any breastfeeding before last study assessment up to 6 months

Study	Treatment n/N	Control n/N	Relative Risk (Random) 95% CI	Weight (%)	Relative Risk (Random) 95% CI
01 Predominant telephone support					
Dennis 2002	25/132	43/126		1.4	0.55 [0.36, 0.85]
Frank 1987	68/171	82/172		3.2	0.83 [0.65, 1.06]
Grossman 1990	42/49	38/48		4.3	1.08 [0.90, 1.30]
Lynch 1986	81/135	79/135		4.0	1.03 [0.84, 1.25]
Mongeon 1995	76/100	80/100		5.3	0.95 [0.82, 1.10]
Subtotal (95% CI)	587	581		18.2	0.92 [0.78, 1.08]
Total events: 292 (Treatment), 322 (Control)					
Test for heterogeneity chi-square=11.24 df=4 p=0.02 I^2 =64.4%					
Test for overall effect z=1.00 p=0.3					
02 Predominant face-to-face contact					
Albernaz 2003	25/94	41/94		1.5	0.61 [0.41, 0.92]
Barros 1994	280/450	293/450		6.7	0.96 [0.87, 1.05]
Bhandari 2003	31/221	29/189		1.2	0.91 [0.57, 1.46]
Brent 1995	39/58	52/57		4.1	0.74 [0.61, 0.90]
Chapman 2004	45/90	51/75		3.0	0.74 [0.57, 0.95]
Froozani 1999	11/67	17/67		0.6	0.65 [0.33, 1.28]
Jones 1985	142/228	257/355		6.1	0.86 [0.76, 0.97]
Kramer 2001	153/291	171/269		5.4	0.83 [0.72, 0.95]
Leite 1998	177/503	235/500		5.2	0.75 [0.64, 0.87]
Morrell 2000	259/311	264/312		7.5	0.98 [0.92, 1.05]
Morrow 1999	26/80	11/30		0.8	0.89 [0.50, 1.56]
Pinelli 2001	42/64	47/64		3.4	0.89 [0.71, 1.13]
Quinlivan 2003	49/65	55/71		4.3	0.97 [0.81, 1.17]
Winterburn 2003	23/30	39/42		3.7	0.83 [0.67, 1.02]
Subtotal (95% CI)	2552	2575		53.4	0.85 [0.79, 0.92]
Total events: 1302 (Treatment), 1562 (Control)					
Test for heterogeneity chi-square=30.52 df=13 p=0.004 I^2 =57.4%					



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Study	Treatment n/N	Control n/N	Relative Risk (Random) 95% CI	Weight (%)	Relative Risk (Random) 95% CI
Test for overall effect z=4.12 p=0.00004					
03 Balanced telephone and face-to-face support					
Di Napoli 2004	129/303	118/302		4.2	1.09 [0.90, 1.32]
Gagnon 2002	45/292	51/294		1.8	0.89 [0.62, 1.28]
Graffy 2004	220/363	226/357		6.2	0.96 [0.85, 1.07]
Kools 2005	188/265	162/242		6.1	1.06 [0.94, 1.19]
McDonald 2003	147/425	130/424		4.1	1.13 [0.93, 1.37]
Porteous 2000	1/27	8/25		0.1	0.12 [0.02, 0.86]
Pugh 2002	12/21	13/20		1.1	0.88 [0.54, 1.44]
Sjolin 1979	43/78	51/78		3.0	0.84 [0.65, 1.09]
Wrenn 1997	30/79	46/107		1.9	0.88 [0.62, 1.26]
Subtotal (95% CI)	1853	1849		28.4	1.00 [0.91, 1.09]
Total events: 815 (Treatment), 805 (Control)					
Test for heterogeneity chi-square=11.00 df=8 p=0.20 I^2 =27.3%					
Test for overall effect z=0.08 p=0.9					
Total (95% CI)	4992	5005		100.0	0.91 [0.86, 0.96]
Total events: 2409 (Treatment), 2689 (Control)					
Test for heterogeneity chi-square=58.22 df=27 p=0.0004 I^2 =53.6%					
Test for overall effect z=3.55 p=0.0004					

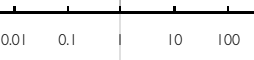
Analysis 09.01. Comparison 09 Differing timings of support versus usual care, Outcome 01 Stopping any breastfeeding at last study assessment up to 6 months

Review: Support for breastfeeding mothers

Comparison: 09 Differing timings of support versus usual care

Outcome: 01 Stopping any breastfeeding at last study assessment up to 6 months

Study	Treatment n/N	Control n/N	Relative Risk (Random) 95% CI	Weight (%)	Relative Risk (Random) 95% CI
01 Postnatal support alone					
Albernaz 2003	25/94	41/94		1.5	0.61 [0.41, 0.92]
Barros 1994	280/450	293/450		6.7	0.96 [0.87, 1.05]
Bhandari 2003	31/221	29/189		1.2	0.91 [0.57, 1.46]
Dennis 2002	25/132	43/126		1.4	0.55 [0.36, 0.85]
Di Napoli 2004	129/303	118/302		4.2	1.09 [0.90, 1.32]
Frank 1987	68/171	82/172		3.2	0.83 [0.65, 1.06]
Froozani 1999	11/67	17/67		0.6	0.65 [0.33, 1.28]
Gagnon 2002	45/292	51/294		1.8	0.89 [0.62, 1.28]
Grossman 1990	42/49	38/48		4.3	1.08 [0.90, 1.30]
Jones 1985	142/228	257/355		6.1	0.86 [0.76, 0.97]
Kramer 2001	153/291	171/269		5.4	0.83 [0.72, 0.95]
Leite 1998	177/503	235/500		5.2	0.75 [0.64, 0.87]
Lynch 1986	81/135	79/135		4.0	1.03 [0.84, 1.25]
Morrell 2000	259/311	264/312		7.5	0.98 [0.92, 1.05]
Pinelli 2001	42/64	47/64		3.4	0.89 [0.71, 1.13]
Porteous 2000	1/27	8/25		0.1	0.12 [0.02, 0.86]
Pugh 2002	12/21	13/20		1.1	0.88 [0.54, 1.44]
Quinlivan 2003	49/65	55/71		4.3	0.97 [0.81, 1.17]
Sjolin 1979	43/78	51/78		3.0	0.84 [0.65, 1.09]
Wrenn 1997	30/79	46/107		1.9	0.88 [0.62, 1.26]
Subtotal (95% CI)	3581	3678		66.7	0.89 [0.84, 0.96]
Total events: 1645 (Treatment), 1938 (Control)					
Test for heterogeneity chi-square=41.74 df=19 p=0.002 I^2 =54.5%					
Test for overall effect z=3.14 p=0.002					
02 Antenatal component to support					
Brent 1995	39/58	52/57		4.1	0.74 [0.61, 0.90]
Chapman 2004	45/90	51/75		3.0	0.74 [0.57, 0.95]



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Study	Treatment n/N	Control n/N	Relative Risk (Random) 95% CI	Weight (%)	Relative Risk (Random) 95% CI
Graffy 2004	220/363	226/357		6.2	0.96 [0.85, 1.07]
Kools 2005	188/265	162/242		6.1	1.06 [0.94, 1.19]
McDonald 2003	147/425	130/424		4.1	1.13 [0.93, 1.37]
Mongeon 1995	76/100	80/100		5.3	0.95 [0.82, 1.10]
Morrow 1999	26/80	11/30		0.8	0.89 [0.50, 1.56]
Winterburn 2003	23/30	39/42		3.7	0.83 [0.67, 1.02]
Subtotal (95% CI)	1411	1327		33.3	0.92 [0.83, 1.02]
Total events: 764 (Treatment), 751 (Control)					
Test for heterogeneity chi-square=18.80 df=7 p=0.009 I^2 =62.8%					
Test for overall effect z=1.55 p=0.1					
Total (95% CI)	4992	5005		100.0	0.91 [0.86, 0.96]
Total events: 2409 (Treatment), 2689 (Control)					
Test for heterogeneity chi-square=58.22 df=27 p=0.0004 I^2 =53.6%					
Test for overall effect z=3.55 p=0.0004					

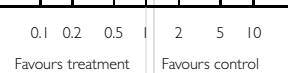
Analysis 10.01. Comparison 10 Differing training versus usual care, Outcome 01 Stopping exclusive breastfeeding before last study assessment

Review: Support for breastfeeding mothers

Comparison: 10 Differing training versus usual care

Outcome: 01 Stopping exclusive breastfeeding before last study assessment

Study	Treatment n/N	Control n/N	Relative Risk (Random) 95% CI	Weight (%)	Relative Risk (Random) 95% CI
01 WHO/UNICEF courses versus usual care					
Albernaz 2003	61/94	71/94		16.4	0.86 [0.71, 1.04]
Bhandari 2003	68/221	110/189		15.8	0.53 [0.42, 0.67]
Froozani 1999	35/67	63/67		15.7	0.56 [0.44, 0.70]
Haider 2000	101/227	346/363		16.9	0.47 [0.40, 0.54]
Kramer 2001	244/262	240/242		17.7	0.94 [0.91, 0.97]
Leite 1998	379/503	403/500		17.6	0.93 [0.88, 1.00]
Subtotal (95% CI)	1374	1455		100.0	0.69 [0.52, 0.91]
Total events: 888 (Treatment), 1233 (Control)					
Test for heterogeneity chi-square=233.01 df=5 p=<0.0001 I^2 =97.9%					



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Study	Treatment n/N	Control n/N	Relative Risk (Random) 95% CI	Weight (%)	Relative Risk (Random) 95% CI
Test for overall effect z=2.63 p=0.009					
02 La Leche League training versus usual care					
Morrow 1999	36/80	26/30		100.0	0.52 [0.39, 0.69]
Subtotal (95% CI)	80	30		100.0	0.52 [0.39, 0.69]
Total events: 36 (Treatment), 26 (Control)					
Test for heterogeneity: not applicable					
Test for overall effect z=4.59 p<0.00001					

Analysis 11.01. Comparison 11 Support of mothers with sick children, Outcome 01 Exclusive breastfeeding 2 to 3 weeks after discharge from healthcare facility

Review: Support for breastfeeding mothers

Comparison: 11 Support of mothers with sick children

Outcome: 01 Exclusive breastfeeding 2 to 3 weeks after discharge from healthcare facility

Study	Treatment n/N	Control n/N	Relative Risk (Fixed) 95% CI	Weight (%)	Relative Risk (Fixed) 95% CI
Davies-Adetugbo 1997	38/84	6/85		42.7	6.41 [2.86, 14.36]
Haider 1996	78/125	8/125		57.3	9.75 [4.92, 19.32]
Total (95% CI)	209	210		100.0	8.32 [4.94, 14.01]
Total events: 116 (Treatment), 14 (Control)					
Test for heterogeneity chi-square=0.61 df=1 p=0.44 I^2 =0.0%					
Test for overall effect z=7.97 p<0.00001					

Analysis 11.02. Comparison 11 Support of mothers with sick children, Outcome 02 Recurrence of diarrhoea 2 to 3 weeks after discharge from healthcare facility

Review: Support for breastfeeding mothers

Comparison: 11 Support of mothers with sick children

Outcome: 02 Recurrence of diarrhoea 2 to 3 weeks after discharge from healthcare facility

Study	Treatment n/N	Control n/N	Relative Risk (Fixed) 95% CI	Weight (%)	Relative Risk (Fixed) 95% CI
Bhandari 2003	66/221	70/189		70.3	0.81 [0.61, 1.06]
Davies-Adetugbo 1997	10/84	17/85		15.7	0.60 [0.29, 1.22]
Haider 1996	4/125	15/125		14.0	0.27 [0.09, 0.78]
Total (95% CI)	430	399		100.0	0.70 [0.54, 0.90]

Total events: 80 (Treatment), 102 (Control)

Test for heterogeneity chi-square=4.33 df=2 p=0.11 I^2 =53.8%

Test for overall effect z=2.82 p=0.005

Analysis 12.01. Comparison 12 Lay support versus usual care, Outcome 01 Maternal satisfaction with infant feeding

Review: Support for breastfeeding mothers

Comparison: 12 Lay support versus usual care

Outcome: 01 Maternal satisfaction with infant feeding

Study	Treatment N	Treatment Mean(SD)	Control N	Control Mean(SD)	Weighted Mean Difference (Fixed) 95% CI	Weight (%)	Weighted Mean Difference (Fixed) 95% CI
Dennis 2002	130	53.81 (5.69)	121	52.98 (5.94)		100.0	0.83 [-0.61, 2.27]
Total (95% CI)	130		121			100.0	0.83 [-0.61, 2.27]

Test for heterogeneity: not applicable

Test for overall effect z=1.13 p=0.3

Analysis 13.01. Comparison 13 Lactation nurse versus usual care, Outcome 01 Sufficient help received with breastfeeding problems

Review: Support for breastfeeding mothers

Comparison: 13 Lactation nurse versus usual care

Outcome: 01 Sufficient help received with breastfeeding problems

Study	Treatment n/N	Control n/N	Relative Risk (Fixed) 95% CI	Weight (%)	Relative Risk (Fixed) 95% CI
01 In hospital					
Jones 1985	75/228	57/355		100.0	2.05 [1.52, 2.77]
Subtotal (95% CI)	228	355		100.0	2.05 [1.52, 2.77]
Total events: 75 (Treatment), 57 (Control)					
Test for heterogeneity: not applicable					
Test for overall effect z=4.66 p<0.00001					
02 At home					
Jones 1985	80/228	68/355		100.0	1.83 [1.39, 2.42]
Subtotal (95% CI)	228	355		100.0	1.83 [1.39, 2.42]
Total events: 80 (Treatment), 68 (Control)					
Test for heterogeneity: not applicable					
Test for overall effect z=4.28 p=0.00002					

Analysis 14.01. Comparison 14 Combination of lay and professional support versus usual care, Outcome 01 Stopping any breastfeeding at different times

Review: Support for breastfeeding mothers

Comparison: 14 Combination of lay and professional support versus usual care

Outcome: 01 Stopping any breastfeeding at different times

Study	Treatment n/N	Control n/N	Relative Risk (Random) 95% CI	Weight (%)	Relative Risk (Random) 95% CI
01 Before 4 to 6 weeks					
Barros 1994	85/450	131/450		8.4	0.65 [0.51, 0.82]
Subtotal (95% CI)	450	450		8.4	0.65 [0.51, 0.82]
Total events: 85 (Treatment), 131 (Control)					
Test for heterogeneity: not applicable					
Test for overall effect z=3.54 p=0.0004					
02 Before 2 months					
Barros 1994	140/450	193/450		11.8	0.73 [0.61, 0.86]
Brent 1995	39/58	52/57		10.5	0.74 [0.61, 0.90]
Winterburn 2003	20/30	36/42		6.9	0.78 [0.59, 1.03]

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Study	Treatment n/N	Control n/N	Relative Risk (Random) 95% CI	Weight (%)	Relative Risk (Random) 95% CI
Subtotal (95% CI)	538	549		29.1	0.74 [0.66, 0.83]
Total events: 199 (Treatment), 281 (Control)					
Test for heterogeneity chi-square=0.19 df=2 p=0.91 I^2 =0.0%					
Test for overall effect z=5.02 p<0.00001					
03 Before 3 months					
Barros 1994	213/450	231/450		14.4	0.92 [0.81, 1.05]
Bhandari 2003	31/221	29/189		3.1	0.91 [0.57, 1.46]
Winterburn 2003	23/30	39/42		9.6	0.83 [0.67, 1.02]
Subtotal (95% CI)	701	681		27.1	0.90 [0.80, 1.00]
Total events: 267 (Treatment), 299 (Control)					
Test for heterogeneity chi-square=0.84 df=2 p=0.66 I^2 =0.0%					
Test for overall effect z=1.97 p=0.05					
04 Before 4 months					
Barros 1994	251/450	264/450		15.8	0.95 [0.85, 1.06]
Subtotal (95% CI)	450	450		15.8	0.95 [0.85, 1.06]
Total events: 251 (Treatment), 264 (Control)					
Test for heterogeneity: not applicable					
Test for overall effect z=0.88 p=0.4					
06 Before 6 months					
Barros 1994	280/450	293/450		16.7	0.96 [0.87, 1.05]
Pugh 2002	12/21	13/20		2.9	0.88 [0.54, 1.44]
Subtotal (95% CI)	471	470		19.6	0.95 [0.86, 1.05]
Total events: 292 (Treatment), 306 (Control)					
Test for heterogeneity chi-square=0.11 df=1 p=0.74 I^2 =0.0%					
Test for overall effect z=0.98 p=0.3					
Total (95% CI)	2610	2600		100.0	0.84 [0.77, 0.92]
Total events: 1094 (Treatment), 1281 (Control)					
Test for heterogeneity chi-square=20.33 df=9 p=0.02 I^2 =55.7%					
Test for overall effect z=3.82 p=0.0001					

Analysis 14.02. Comparison 14 Combination of lay and professional support versus usual care, Outcome 02 Stopping exclusive breastfeeding at different times

Review: Support for breastfeeding mothers

Comparison: 14 Combination of lay and professional support versus usual care

Outcome: 02 Stopping exclusive breastfeeding at different times

Study	Treatment n/N	Control n/N	Relative Risk (Random) 95% CI	Weight (%)	Relative Risk (Random) 95% CI
01 Before 3 months					
Bhandari 2003	68/221	110/189		20.9	0.53 [0.42, 0.67]
Pugh 2002	12/21	15/20		12.8	0.76 [0.49, 1.19]
Subtotal (95% CI)	242	209		33.7	0.60 [0.43, 0.86]
Total events: 80 (Treatment), 125 (Control)					
Test for heterogeneity chi-square=2.08 df=1 p=0.15 I^2 =52.0%					
Test for overall effect z=2.83 p=0.005					
02 Before 4 months					
Bhandari 2003	93/221	170/189		23.6	0.47 [0.40, 0.55]
Subtotal (95% CI)	221	189		23.6	0.47 [0.40, 0.55]
Total events: 93 (Treatment), 170 (Control)					
Test for heterogeneity: not applicable					
Test for overall effect z=9.20 p<0.00001					
03 Before 6 months					
Bhandari 2003	144/221	183/189		25.6	0.67 [0.61, 0.74]
Pugh 2002	15/21	17/20		17.0	0.84 [0.61, 1.17]
Subtotal (95% CI)	242	209		42.7	0.71 [0.59, 0.86]
Total events: 159 (Treatment), 200 (Control)					
Test for heterogeneity chi-square=1.62 df=1 p=0.20 I^2 =38.3%					
Test for overall effect z=3.58 p=0.0003					
Total (95% CI)	705	607		100.0	0.62 [0.50, 0.77]
Total events: 332 (Treatment), 495 (Control)					
Test for heterogeneity chi-square=22.50 df=4 p=0.0002 I^2 =82.2%					
Test for overall effect z=4.23 p=0.00002