A novel peer-support intervention using motivational interviewing for breastfeeding maintenance: a UK feasibility study

Shantini Paranjothy,[1]* Lauren Copeland,[1] Laura Merrett,[1] Aimee Grant,[2] Rhiannon Phillips,[1] Nina Gobat,[1] Julia Sanders,[3] Deborah Fitzsimmons,[4] Billie Hunter,[3] Sian Regan,[5] Rebecca Playle,[2] Amy Brown,[6] Sally Tedstone,[7] Heather Trickey[8] and Mike Robling[2]

[1]Division of Population Medicine, Cardiff University, Cardiff, UK
[2]Centre for Trials Research, Cardiff University, Cardiff, UK
[3]School of Healthcare Sciences, Cardiff University, Cardiff, UK
[4]College of Human and Health Sciences, Swansea University, Swansea, UK
[5]Involving People Network, Cardiff, UK
[6]Public Health, Policy and Social Sciences, Swansea University, Swansea, UK
[7]Royal United Hospitals Bath NHS Foundation Trust, Bath, UK
[8]Centre for the Development and Evaluation of Complex Interventions for Public Health Improvement, Cardiff University, Cardiff, UK

*Corresponding author ParanjothyS@cardiff.ac.uk

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Scientific summary

A UK feasibility study of motivational interviewing for breastfeeding

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Scientific summary

Background

The benefits of breastfeeding for the health of babies and mothers are well known. However, in the UK, although 81% of women start breastfeeding, fewer than half continue beyond 6 weeks and only 1% meet the World Health Organization (WHO)'s recommendation of exclusive breastfeeding for 6 months. There are marked inequalities in breastfeeding rates: younger mothers (aged < 20 years) of white British ethnicity and of lower socioeconomic status are less likely to start breastfeeding or continue beyond 6 weeks. Professional support for breastfeeding is widely available in the UK, but new approaches to support women who are at the highest risk of not continuing breastfeeding are urgently needed. Breastfeeding peer supporters are lay women who have experience of breastfeeding and may come from a similar background to the women whom they support. Compared with health professionals, peer supporters may be more approachable, provide role models that mothers can relate to and have direct experience of the challenges of breastfeeding within a social context where it may not be the norm.

Breastfeeding peer support (BFPS) was found to be effective for breastfeeding maintenance in low- or middle-income countries, but not in UK-based randomised controlled trials (RCTs). The non UK-based RCTs showed that intensive (proactive, scheduled antenatal and postnatal contact, ranging from at least weekly to eight visits postnatally) one-to-one peer-support programmes with high uptake rates were effective for increasing breastfeeding continuation rates. None of the UK-based trials provided proactive support in the early postnatal period, during which there is usually a steep decline in breastfeeding rates. It is not known whether or not peer support for breastfeeding provided in the early postnatal period and targeted at women who have not previously breastfed, nor experienced breastfeeding in their social groups, can increase the duration of breastfeeding in the UK.

The first aim of this study was to develop a novel early contact and proactive BFPS intervention that used a motivational interviewing (MI) approach (MI-based BFPS). MI is a form of counselling that supports people in changing their behaviour by exploring their thoughts and concerns and supporting them in setting their own goals. MI has been used in breastfeeding interventions delivered by health educators and nurses with inconsistent results. Health-care professionals and support staff (including peer supporters) can access MI training in some settings, but the feasibility and acceptability of formally incorporating a MI-based approach to deliver BFPS has not yet been investigated.

The second aim was to carry out a feasibility study to assess whether or not the new MI-based BFPS intervention can be delivered as intended to women who live in areas with high levels of social deprivation. Previous studies of BFPS effectiveness in the UK have demonstrated that it is feasible and acceptable to randomise pregnant women in the antenatal period to receive BFPS interventions in both individual and cluster RCTs. However, they highlighted problems with poor uptake and adherence to the intervention. We therefore designed our feasibility study to provide evidence for what we considered to be the key developmental and feasibility questions that need to be answered when delivering a high-intensity BFPS intervention to mothers living in areas with high levels of social deprivation. This included an assessment of the key recruitment and data collection challenges and how these can be addressed. We proposed to use these data to make recommendations for the design of a full RCT to test the effectiveness of MI-based BFPS for breastfeeding maintenance if warranted.

Methods

The research was carried out in two parts: (1) intervention development and (2) feasibility testing.

Intervention development

Understanding existing practice

We conducted a web-based survey of infant feeding co-ordinators in the four UK nations to map current service provision and understand the content of BFPS and delivery methods, including any underpinning theories, models of best practice, facilitators of, and barriers to, implementation. This was supplemented by a rapid literature review to identify the features of one-to-one peer support that contributed to the successful delivery (or otherwise) of BFPS interventions.

Qualitative research

We conducted one focus group with fathers ($n = 3$), three focus groups with mothers and pregnant women ($n = 14$) and three focus groups with peer supporters ($n = 15$) to understand the expectations and required functions of BFPS interventions and to clarify and validate the key messages from our rapid evidence review. One-to-one in-depth telephone interviews ($n = 14$) were conducted with health-care professionals to enable them to discuss their views on, and experiences of, BFPS within their local service and perceived facilitators of, and barriers to, implementation. We also explored the challenges for participation and optimal strategies for recruitment and consent to a research study evaluation of BFPS.

Development of the intervention specification and corresponding logic model

Using the behaviour change wheel (BCW) as a framework, we identified the sources of behaviour to be addressed by the intervention. This used the findings from the rapid evidence review, qualitative research and discussion with the Stakeholder Advisory Group categorised according to the capability opportunity motivation – behaviour (COM-B) model. We linked these behaviours with the relevant functions of the intervention and service requirements for implementation. By the end of the process we produced the specification and corresponding logic model for the Mam-Kind intervention, which was endorsed by our Stakeholder Advisory Group.

Feasibility study design

The feasibility study was a non-randomised multisite before-and-after study with process evaluation.

Setting

The study was carried out in three community maternity sites, which were in the 20% most deprived communities based on the English/Welsh Index of Multiple Deprivation, with breastfeeding initiation rates lower than the UK average (< 70%) and a higher than average rate of teenage pregnancy (> 41.9 conceptions per 1000 women aged < 18 years).

Participant recruitment

Pregnant women considering breastfeeding were eligible for the study. Women who did not plan to breastfeed, who had a clinical reason that precluded breastfeeding continuation or who were unable to consent were excluded. Community midwives introduced the study to women at 28 weeks' gestation onwards and provided details of potential participants to the research team, who obtained consent and completed the recruitment process.

Study intervention

The intervention, MI-based BFPS (Mam-Kind), was characterised by face-to-face contact at 48 hours after birth, proactive alternate-day one-to-one peer-supporter (Mam-Kind buddy)-led contact for 2 weeks after birth and mother-led contact for up to 6 weeks. Mam-Kind buddies were women from a similar locality to the women who they were supporting, who had breastfed and who had completed accredited BFPS training and MI training.

Outcome measures

Quantitative data were used to describe intervention uptake and the completion of scheduled contacts with peer supporters according to age group and parity; the recruitment and retention of peer supporters;

and intervention costs from the perspective of the UK NHS and women and their families. We assessed the feasibility of different methods (structured telephone interviews with all mothers, data collected by health visitors and routine NHS data from child health systems) of collecting outcome data at 10 days and 8–10 weeks (exclusive and partial breastfeeding, maternal and child health, well-being, satisfaction and health-care resource utilisation). Mam-Kind buddies completed structured diaries and audio-recorded their face-to-face sessions with mothers.

Process evaluation

We conducted semistructured interviews with a purposive sample of mothers who provided informed consent ($n = 28$), health-care professionals ($n = 14$) and peer supporters ($n = 8$). We used thematic analysis to assess the acceptability of the intervention. MI fidelity was assessed with the Motivational Interviewing Treatment Integrity (MITI) 4.1 tool using 16 audio-recorded sessions between mothers and Mam-Kind buddies. We mapped the findings from deductive content thematic analysis against the objectives in the intervention specification to assess the extent to which the intervention objectives were met, including the appropriateness of the session content and the timing of contact.

Results

Rapid evidence review

The survey of infant feeding co-ordinators (response rate 19.5%; $n = 136$ individual responses from 58% of NHS trust or health board areas) showed that the provision of BFPS was not standardised, none of the models in use had an explicit theoretical basis and there had not been any robust evaluations of clinical effectiveness or cost-effectiveness. The majority of peer supporters provided support in group settings, with little provision of one-to-one support in the early postnatal period. The survey and literature review highlighted key considerations for implementing BFPS, including the need for clarity about the peer-supporter role and responsibilities and professional boundaries and integration with existing local health-care services and close working with health-care professionals.

Qualitative research for intervention development

The focus groups confirmed that peer supporters played an important role in supporting mothers, particularly in areas where breastfeeding was not the norm. Training for the peer-supporter role and the need to provide consistent advice (and integration into local health services) were prominent themes for both peer supporters and health-care professionals.

Using the BCW, we determined that the components of the BFPS intervention should address psychological capability, social opportunity and reflective motivation, to enable women to continue breastfeeding.

Feasibility study

Eight Mam-Kind buddies delivered the Mam-Kind intervention to 70 participants. The majority of participants (94%) were white, employed and aged between 19 and 41 years. Intervention uptake was high (75%) and did not vary according to age or parity. The majority of women who received an antenatal and postnatal contact from the peer supporter reciprocated this contact. The majority of contacts (79%) were initiated by the Mam-Kind buddy, demonstrating the intended proactive nature of the intervention, and 73% ($n = 51$) of participants received a contact within 48 hours of the birth of their baby. Delays in birth notification to Mam-Kind buddies hindered contact within 48 hours in some cases.

Data collection

Follow-up data were available for 78% of participants at 10 days and 64% at 8 weeks. Data collection using telephone interviews was feasible and acceptable, evidenced by high levels of data completeness (> 80%) for almost all variables. We obtained data on breastfeeding status at 8 weeks from the health-care team that provided care for seven of the 21 participants who were lost to follow-up.

We explored the possibility of facilitating health visitors to collect some of the outcome data, for example by augmenting manual or electronic systems; however, this was not possible because of the wide variation in methods used to capture these data. We did not collect routine data from Hospital Episode Statistics or general practice, as this was not feasible within the time scale of the study, but we have clarified the wording required on consent forms to enable these data to be accessed in a future trial. We accessed reports from the Welsh Government that show good (and continually improving) data completeness for breastfeeding at 8 weeks on the National Community Child Health Database and have clarified the process for accessing these data. The collation of breastfeeding data in England varies by region and data are most easily collected by a local member of the research team. The process evaluation highlighted the potential for using other methods for data collection, such as text- and web-based methods, to reduce attrition in a full trial. Peer-supporter diaries provided sufficient data to undertake an analysis of their contact with mothers and audio-recordings were completed in 78 (52%) of the 149 face-to-face Mam-Kind sessions that could potentially have been recorded, demonstrating the feasibility and acceptability of collecting these data. Provisional exploration of health economic considerations in the design and collection of outcome measures for the economic analysis demonstrated that it is feasible to collect appropriate information.

Feasibility and acceptability of delivering the Mam-Kind intervention

Qualitative interviews with participants, Mam-Kind buddies and health service professionals showed that the intervention was acceptable. Mam-Kind buddies delivered the intervention content with fidelity (93% of intervention objectives were met) and, in some cases, developed certain MI skills to a competency level. However, they reported difficulties in changing from an expert role to using a collaborative approach. These findings were used to refine the training and intervention specification to emphasise the focus of the intervention on providing mother-centric support. Health-care professionals were satisfied that the intervention could be integrated with existing services.

Strengths and limitations

The main strength of the study was the systematic approach, consistent with Medical Research Council guidance for the development of complex interventions, to intervention development. We engaged a stakeholder expert advisory group that included service users, peer supporters and health-care service providers in an interactive and iterative process to develop and refine the Mam-Kind intervention. This allowed us to clarify and develop strategies to address the key issues around intervention design, content and implementation, informed by the rapid evidence review and qualitative work. However, there were some limitations. The response rate to the survey of infant feeding co-ordinators was low (19.5%). To mitigate this, we used publicly available data from organisational websites to supplement our survey findings. Although this provided data about the availability of peer support, it did not provide detail about how services were run or how training and supervision for peer supporters were provided. We experienced significant delays during the feasibility study in obtaining research passports for Mam-Kind buddies, which impacted on their ability to access postnatal wards and provide support within 48 hours. A further limitation was that the women who were recruited to receive the intervention may not be representative of the catchment population in the study sites. This was probably because of the small numbers recruited within the short duration of feasibility testing. The findings from the process evaluation and discussions with the stakeholder expert advisory group identified strategies that can be adopted in a full trial to ensure reach of the intervention to the intended target population.

Conclusion

The Mam-Kind intervention was acceptable and feasible to deliver within NHS maternity services and should be tested for effectiveness in a multicentre RCT. We consider a two-arm individual RCT to be an appropriate study design, with a built-in process evaluation to assess how Mam-Kind is implemented across a wider range of clinical settings (including fidelity). This will allow us to test whether or not the assumptions in the logic model hold true across these settings, further explore barriers to, and facilitators of, implementation and assess intervention reach. A pilot phase with early opening of two or three sites

should be incorporated to test the achievability of recruitment and retention to the study. A range of data collection methods should be employed, informed by the findings from this feasibility study, including the use of routinely collected data and text and telephone interviews (carried out by a dedicated team with flexible working hours) to reduce attrition rates. Mam-Kind buddies should be employed by the NHS service within which they will work. A member of the research team should be based in each recruitment trial site to champion the study locally and address any recruitment challenges in a timely manner.
An in-trial economic evaluation should be conducted alongside this RCT, including an incremental cost-effectiveness analysis based on the primary outcome and a cost–utility (cost per quality-adjusted life-year) analysis, from a multiagency perspective.

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