WHAT WORKS FOR BREASTFEEDING PEER SUPPORT: TIME TO GET REAL?

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ABSTRACT

Policymakers from developed countries who are looking to commission breastfeeding peer support (BPS) services have every cause to be puzzled as to whether or not they can improve continuation rates. On the one hand, BPS interventions are internationally recognised as having the potential to contribute to improving breastfeeding durations. A recent Cochrane review found that additional support from lay and professional supporters can have an impact on rates, and UK-based qualitative studies suggest that BPS can encourage and enable women to breastfeed for longer periods. In the UK, peer support for breastfeeding forms part of NHS commissioning guidance. On the other hand, a recent meta-regression of BPS randomised controlled trials (RCTs) found little evidence that BPS interventions improve breastfeeding durations in high-income countries and concluded that peer support for breastfeeding was ‘unlikely to be effective’ in the UK. This paper highlights issues of intervention design and implementation that problematise interpretation of trial data drawn from the meta-regression analysis within high income countries. The paper then goes on to consider the potential for alternative approaches to review evidence for BPS, highlighting the need to integrate insights from qualitative research studies. Drawing on findings of a preliminary scoping review, we make the case for a shift towards a realist interpretation of the evidence base. We argue that a realist approach would allow findings emergent from different methodological traditions to be meaningfully integrated and the theoretical basis for BPS to be explored and tested through the construction of context-mechanism-outcome configurations. We believe this will provide a firmer basis for future intervention design and for the development of theoretically-driven evaluation studies, leading to improved clarity for delivery organisations and commissioning agencies. We contend that policy makers and researchers need to stop merely asking ‘does BPS work?’ and look towards approaches which enlighten ‘what works for whom, in what circumstances, in what respects, and how?’

Keywords: Breastfeeding, peer support, realist review, interventions.

BACKGROUND

Peer support is broadly defined as ‘the provision of emotional, appraisal, and informational assistance by a created social network member who possesses experiential knowledge of a specific behaviour or stressor and similar characteristics as the target population.’ It is an intervention that has been applied to a wide range of health topics as a complement to existing health services. The World Health Organization’s (WHO) Global Strategy for Infant and Young Child Feeding, which aims to improve rates for breastfeeding initiation, duration and exclusivity, recommends that national governments develop a network of community-based mother-to-mother breastfeeding support groups and ‘lay and peer counsellors’ to enhance existing services. The WHO’s recommendation receives support from a recently updated Cochrane review based on 52
randomised controlled trials (RCTs and quasi-RCTs) including 37 from high-income countries, which considered the impact of ‘extra support’ on breastfeeding duration and exclusivity compared with ‘usual maternity care.’ The included studies of ‘extra support’ evaluated the impact of additional voluntary or professional supporters working in a designated support role, as well as organisational measures such as additional staff training. The review found that extra support, whether offered by professionals, by lay or peer supporters, or by both, had a positive effect on breastfeeding duration rates. The review indicated that extra support was likely to be more effective in settings with high initiation rates, when delivered face-to-face, when offered proactively, when offered on an on-going scheduled basis, and when tailored to the needs of the population base.\(^2\)

A recent meta-regression undertaken by Jolly et al.\(^6\) focused more narrowly on RCTs of breastfeeding peer support (BPS) interventions, using a narrower definition of BPS as: ‘Support offered by women who have received appropriate training and either have themselves breastfed or have the same socio-economic background, ethnicity, or locality as the women they are supporting. Peer supporters may be voluntary or receive basic remuneration.’\(^6\) This review included 17 studies, 15 of which were judged to have data suitable for quantitative synthesis. This analysis separately considered the combined effect of three elements of heterogeneity among the trials: three levels of ‘country-level income’, two levels of ‘intensity of intervention’ and a binary categorisation as to whether or not the BPS intervention included antenatal contact. The results indicated that the BPS effectiveness varies according to the income level of the country; BPS interventions were found to be likely to increase breastfeeding continuation, especially exclusive breastfeeding in low or middle income countries (where their potential to make a major contribution to health outcomes is high), but had less impact in high-income countries (and were ineffective in the UK). The meta-regression indicated that less intensive interventions (<5 planned contacts) had no impact on breastfeeding duration, and whilst postnatal-only interventions were associated with improved breastfeeding durations, those that combined antenatal and postnatal contact were not.

The primary explanation advanced by Jolly et al.\(^6\) for lowered effectiveness of BPS interventions in high-income countries is that it is difficult for BPS to deliver additional benefit over and above pre-existing systems of postnatal care (for example, in the UK through postnatal visits provided by midwives and a visit from a health visitor at 10-14 days).\(^6\) This seems intuitively reasonable as a partial explanation of the differences; it may well be easier for BPS to demonstrate an impact when it constitutes a jump from ‘virtually no support’ to ‘some support’, as compared to a shift from ‘some support’ to ‘some more support’. However, for the UK at least, as a full explanation this sits uneasily with longitudinal survey data which indicate very frequent unplanned breastfeeding discontinuation. In the first 6 weeks after birth, around one-third of mothers who initiate breastfeeding stop, with 80% of those who discontinue breastfeeding, stopping before they had planned to do so.\(^9\) The explanation is also incongruent with findings from a UK service-user survey which indicated that mothers frequently have poor experiences of postnatal help with breastfeeding.\(^10\) There does seem to be a considerable ‘support gap’ despite the existing framework for care in the UK. The authors of the meta-analysis note a possible alternative explanation that ‘some confounding of setting by intensity of support may exist.’\(^6\) In particular, UK-based interventions, which demonstrated no significant effect on breastfeeding duration and involved fewer than five planned contacts between peer supporter and mother.

As Hoddinott et al.\(^11\) have discussed in their review of UK-based breastfeeding support studies, there are reasons to restrain our pessimism about the potential for interventions to be effective in high-income countries; and despite apparently contradictory findings, in the UK at least, BPS remains a recommended policy tool.\(^4,12,13\) In practice a large number of projects exhibiting considerable heterogeneity are currently being delivered by a range of organisations.\(^14\) Nonetheless, commissioners currently face the challenge of deciding which models should be supported, with some commissioners currently reviewing BPS provision with a view to possible disinvestment.\(^15\) Meta-regression is intended to be hypothesis generating and whilst it has some advantages over traditional meta-analysis in enabling a limited number of aspects of heterogeneity to be included,
relationships identified through meta-regression cannot be taken as proof of causality; the findings from meta-analysis can only be an indicative basis for decision-making around future intervention design.

AIMS AND APPROACHES TO THE LITERATURE

We aimed to identify issues relating to interpretation of trial data, to highlight insights from qualitative research studies that might inform the development of intervention theory, and to consider the potential for alternative approaches to review evidence for BPS. We undertook a scoping review of BPS studies in order to ‘map relevant literature in the field of interest.’ This approach to the evidence base was sufficient for our purpose as a broad research question was being utilised (e.g. evidence for BPS) and it was being undertaken to inform whether a more systematic approach is warranted. In line with the aim and purpose of this approach, a formal quality appraisal of included literature was not undertaken, rather we reviewed and considered each paper for inclusion based on concepts of relevance and rigour. Finally, we considered whether realist approaches would be helpful in overcoming any methodological and theoretical gaps in the existing evidence base.

ISSUES IN THE INTERPRETATION OF BPS TRIAL DATA

Our re-reading of existing BPS RCTs suggests that there are five areas of difficulty that need to be considered when interpreting trial data. First, these include issues relating to study design (for example, a lack of study power evident within a number of the trials, possible contamination across trial arms, and losses to follow-up). Second, several RCTs failed to implement the intervention as planned. The convention for RCTs and meta-regression is to analyse on intention to treat; any failure to implement the intervention as planned or poor reporting of implementation is therefore relevant to the interpretation of the findings (six trials included in meta-regression did not report the number of contacts provided, nor overall uptake of the intervention). Third, there are issues relating to the intended design of trialled interventions which need careful consideration; in retrospect it seems hardly surprising that interventions that are predominantly reactive in the postnatal period (so that the mother is primarily responsible for seeking out help) or that only initiated contact 3 months after the birth of the baby did not ‘work’.

Fourth, despite attempts through meta-regression to stratify findings by country-setting, intervention intensity and timing, existing reviews indicate that multiple aspects of heterogeneity remain unconsidered. Key areas of variation described in study papers but not considered through meta-regression include differences in target populations (income level, ethnicity, previous breastfeeding experience, and motivation to breastfeed); characteristics and training of peer supporters (degree of similarity to target population, length, underpinning philosophy and provenance of peer supporter training, and ongoing supervision arrangements); degree to which the programme was delivered on a proactive or reactive basis; how the intervention was delivered (telephone and/or face-to-face), and where the intervention was delivered (home, clinic, hospital, multi-setting). Further consideration indicates that the three dimensions of difference that were incorporated into the meta-regression require additional exploration. Several interventions in high-income countries are targeted towards low-income or marginalised populations living in those countries; is it the country setting or the relative income of the target population within that country which matter most? What is the ‘minimum’ intensity for effective intervention, and should the level of intensity vary along the mother’s feeding journey? Is BPS intervention in the immediate postnatal period particularly important? As others have noted, descriptions of programme theory, which might provide an underpinning rationale for chosen components of intervention, are frequently absent within the descriptions of trials, so that mechanisms for change are often implied rather than explicit.

Fifth, BPS is a quintessential example of a complex intervention. This is true in the straightforward sense of being complicated, incorporating relationships between dynamic components and the need for different aspects of the intervention design to work in conjunction with one another. These components also include the recipient/provider, components of
the existing intervention setting and multiple delivery partners, and between the intervention and issues relating to a wider context such as Baby Friendly Hospital Initiative status  or country-level compliance with the WHO code. Furthermore, BPS interventions are complex in the true sense that the intervention itself might be expected to lead to unanticipated emergent structures within an existing delivery environment (for example, through the development of new partnership arrangements as the intervention progresses), which in turn may have consequences on effectiveness. Prospective evaluation alongside a trial of a professional-led intervention to explore the impact of breastfeeding support groups by Hoddinott et al. indicated key contextual factors as to why the trial was ineffective in certain areas, including deprivation of the target group and inter-professional barriers. By contrast, in areas where breastfeeding rates rose there was evidence of leadership, multi-disciplinary working, and reflective action cycles.

INSIGHTS FROM QUALITATIVE STUDIES OF BPS

Qualitative studies of BPS provide insight into participants’ own understandings as to why interventions may, or may not, be effective within particular contexts and which components of interventions work in favour or against outcomes. These insights therefore provide a rich resource for theory building. A meta-synthesis of research on perceptions of breastfeeding support, drawn from 31 primary research qualitative and survey studies identified through systematic review, suggests that the character of the relationship between peer supporter and mother may be an important component for peer support intervention design. This review found that breastfeeding support occurs along a continuum from ‘authentic presence’ to ‘disconnected encounters’, and the mothers’ encounters with a supporter may be experienced as ‘facilitative’ or as ‘reductionist’. ‘Authentic presence’ referred to a trusting relationship and rapport between the mother and supporter, with a ‘facilitative’ style reflecting a partnership, with information and support tailored towards the values and needs of the woman. ‘Disconnected encounters’ were characterised by limited or no relationship and a lack of rapport, with a ‘reductionist’ approach signifying how information and advice were given in a didactic style. These findings indicate the importance of person-centred communication skills and of relationships in supporting a woman to breastfeed. The authors indicate ‘continuity of carer’ as a feature likely to facilitate authentic and facilitative encounters. The quality of the relationship between mother and supporter remains an untested component within intervention trial data; nor do we currently have a good understanding of the context factors that can best promote supportive relationships.

Further qualitative studies that have focused on women’s experiences of BPS, and which emphasised the benefits and value of this form of support, have highlighted the significance of shared experience and shared language between peer supporters and women. Studies indicated that BPS is valued in terms of the increased social interactions; the opportunities to question and discuss personal choices in relation to infant feeding as well as the emotional warmth and advocacy that peer support provides. The fact that peer supporters encourage, facilitate, and enable access to group support (e.g. by accompanying women) and subsequent supportive peer networks is also positively perceived. Whilst these studies provide valuable evidence in terms of what women value, and point to the mechanisms through which support can be effective, issues pertaining to how BPS should be delivered, when, and by whom remain unanswered.

CASE FOR A REALIST APPROACH

Researchers have suggested that further trials to assess the effectiveness (including cost-effectiveness) of BPS are warranted, together with high quality evaluation to support, explore and measure the impact of the intervention. In the UK this recommendation has been taken up by the National Institute of Health Research, with funding recently made available for a feasibility trial of BPS interventions (Health Technol Assessment [HTA] no. 13/18). A key challenge in understanding the varied and often apparently contradictory findings of BPS trials is the lack of clarification of the study context, nature of BPS work involved, the processes through which the scheme operates, as well as the definition or targeting of those most likely to benefit. There is also evidence to suggest that
some BPS interventions are likely to be successful in terms of sustainability and outcomes and are more likely to be perceived as acceptable by mothers. However, these different strands of evidence have not been fully integrated to inform recommendations for intervention design.

Given the paucity of existing evidence for effectiveness in high-income countries, heterogeneity and under-theorisation, social scientists looking to expand the evidence base for BPS need to consider two related questions:

- How can we know what sorts of BPS interventions we should be testing? How can we ensure that when we design BPS interventions we incorporate the characteristics most likely to be associated with success in a given setting (and avoid components likely to be associated with failure)? How can we avoid the dangers of researchers seeking to test their favourite theory, or of commissioners opting to fund designs that have purely operational appeal?

- How should evaluation of BPS be conducted? In particular, how should the experience of implementation failure within BPS interventions inform our decisions about intervention design in the future?

We contend that applying realist approaches to assess and interpret the evidence for BPS would help to answer these questions and to provide guidance as to what sorts of interventions have the potential to create successful outcomes. Pawson and colleagues, key proponents of realist approaches to evidence review and intervention evaluation, argue that because intervention programmes are embedded within a complex interplay of individual, interpersonal and institutional social systems, they can never be expected to work indefinitely in the same way, in all circumstances, for all people. They assert that experimental research operates from the premise that like will always produce like, and that the predominant focus on outcomes in RCTs leads to failure to consider the theoretical underpinnings, contextual factors and mechanisms that enable outcomes (or not as the case may be) to occur. The ‘black box’ between inputs and outcomes remains unopened.

Realist review offers a theoretical-driven approach to evidence synthesis that is particularly suited to understanding complex interventions, where the ‘active ingredient’ of an intervention is likely to be better understood at a theoretical level than as a specific treatment or process. This approach aims to uncover the nature of mechanisms of effect (processes that act directly to make a difference, and that can be activated either intentionally or unintentionally by those running programmes) and how they create an effect, rather than just measuring if an effect occurs or not. Furthermore, realist review explicitly sets out to examine context: the particular social conditions and circumstances in which these mechanisms operate, and which combination of mechanism and context creates the best outcomes (context + mechanism = outcome).

Realist reviews have previously been used to explore the successful components of school feeding programmes, participatory research, and health-related lifestyle advisor roles. When undertaking a realist review, the theoretical/explanatory frameworks - the ‘middle range theories’ that reflect many working hypotheses - are identified. Evidence is then gathered from published quantitative, qualitative, and grey literature about the process of implementation, outcomes as well as wider contextual information relating to the individuals, interrelationships, institutions and infrastructures within and through which the intervention is delivered. This information is subjected to appraisal and subsequently explored to identity the relationships between context (the internal and external ‘backdrop’ into which programmes are introduced that are relevant to the operation of the programme mechanisms including cultural, social, interpersonal, and economic factors) and an understanding of how this influences the ‘mechanisms’ (the processes that create specific cognitive or emotional responses to the intervention) to achieve certain outcomes. The evidence base is subsequently evaluated to identify the demi-regularities (the semi-predictable patterns or pathways of programme functioning) and assessed against the underpinning theories with adjudication between theories considered as relevant, leading to development of a unified theory as to why particular kinds of interventions in particular places might be hypothesised to be effective.

As a basic example of a theoretical explanation/middle range theory developed in this way: if a peer supporter shares the same cultural
characteristics as the woman being supported (context), this may lead the mother to wish to reinforce her sense of belonging to that group (through a mechanism of social congruence) leading to breastfeeding continuation (outcome). In this example, the mechanism of social congruence is identified as a demi-regularity, a theoretical relationship which may be common across different intervention programmes, including breastfeeding support programmes that do not necessarily involve peer supporters, or peer interventions that are not necessarily related to breastfeeding (e.g. smoking cessation, and management of depression).

High-level explanations for the success, or not, of BPS interventions are indicated in recent reviews. The discussion sections of trial papers also include many theories as to why BPS works in any particular setting; these include: ‘the peer supporter is able to build a supportive relationship with the mother’, ‘the intervention is proactive and easily accessible to the mother’, ‘the intervention is timely’, and ‘there is a supportive policy infrastructure at service level.’ Explanations as to why BPS may not be effective include: ‘difficulties in the peer-supporter/professional interface’, ‘other forms of support are available’, ‘the women who are targeted do not want to access peer support’, and the ‘intervention targets women who are not motivated to breastfeed.’ Whilst these potential explanations are useful, there remains a lack of clarity in terms of how components of interventions that seem to enhance or diminish chances of success can be achieved or mitigated in practice. For example, what mechanisms need to be fired in order for effective peer-woman relationships to be forged, what are the important interactions between ‘peer’ characteristics and delivery context, and which outcomes are important and meaningful to women themselves? An in-depth realist review, drawing on published and grey literature, and bridging the gap between the evidence synthesis formats undertaken in this area, could help to identify and substantiate the causal paths between maternal perceptions and expectations of support, characteristics of BPS and outcomes. Through a ‘realist’ focus on understanding why change occurs and in which conditions change is most likely to occur, the transferable lessons identified through this process could be utilised to inform future BPS interventions.

Whether or not RCTs are compatible with a realist approach to developing an evidence base for complex social interventions is currently a topic of debate. Some authors, who accept many of the arguments as to the limitations of RCTs, suggest that the philosophy of realism should not rule out experimental methods. They argue that experimental methods are crucial to establishing cause-effect relationships, and propose ‘realist trials’ as a way to overcome the ‘black box’ problem of traditional RCTs. They suggest that a ‘realist trial’ design would involve multiple trial arms and factorial designs, combined with longitudinal qualitative data collection with a focus on seeking to validate or refute the theories that underlie interventions. Others reject the concept of a realist RCT, attesting that suggestions for improving evidence gathering through experimental designs may take some steps towards understanding social interventions as complicated but will fail to take account of the characteristics of social interventions which mark out their true complexity – non-linearity, local adaption, feedback loops, emergence, path dependence, and the role of human agency.

Our view is that continuing to commission traditional RCTs without a good theoretical underpinning (achieved by applying realist principles to the existing evidence base) is unlikely to produce information that is useful to policymakers. Whether called realist trials or not, any new RCT studies need to clarify theoretical underpinnings and build on a realist appraisal of the existing evidence base. New designs should be based on context-mechanism-outcome relationships that appear to have the potential to work in particular settings with particular target populations to test and extend the theories as to why BPS works or fails in particular contexts. Prospective evaluation is more likely to be informative if it involves embedding a theoretically informed trial within a prospective realist evaluation framework as Hoddinott and colleagues have done, ensuring that it is possible to simultaneously test whether a particular intervention ‘works’ alongside evaluating alternative theories that might be expected to explain outcomes.
CONCLUSION

As a basis for commissioning decisions, outcome data from RCTs of BPS, whether used in isolation or combined through meta-regression, are of limited value. Interpretation difficulties arise from issues of study and intervention design, implementation problems, heterogeneity, under-theorising of mechanisms, and difficulties caused by the likelihood of a complex and emergent relationships between intervention and context. Failure to integrate evidence from experimental trials with findings from qualitative studies has contributed to a failure to develop and test intervention theories, limiting our understanding of context-mechanism interactions and contributing to a cycle of poor intervention design. The message that BPS is unlikely to be effective in the UK and will have limited impact in other high-income countries appears premature.

At worst, the problems inherent in the existing trial data, particularly in UK-based studies, may be leading to overinterpretation of negative findings. It is clearly over-simplistic to view BPS as a single intervention which either works or does not work and which can be evaluated without taking full account of delivery context. Currently, there is a lack of evidence for effectiveness of BPS in the UK, but this lack needs to be considered alongside limited evidence from a handful of RCT studies that demonstrate that BPS can be successful in improving breastfeeding durations in other high-income country contexts. A full realist review may indicate contexts in which forms of BPS are relatively weak or ineffective levers for improving breastfeeding rates. However, findings from qualitative research studies, and the evidence that peer support interventions have had success in other settings, are an important reason to consider that effective context-mechanism-outcome configurations may be found for this form of intervention.

In view of the complexity within the existing evidence base, we argue that realist approaches, which have a theory-driven focus, are needed to move our understanding forward. Our view is that a realist review of the evidence for BPS needs to be undertaken in order to inform future intervention design.

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