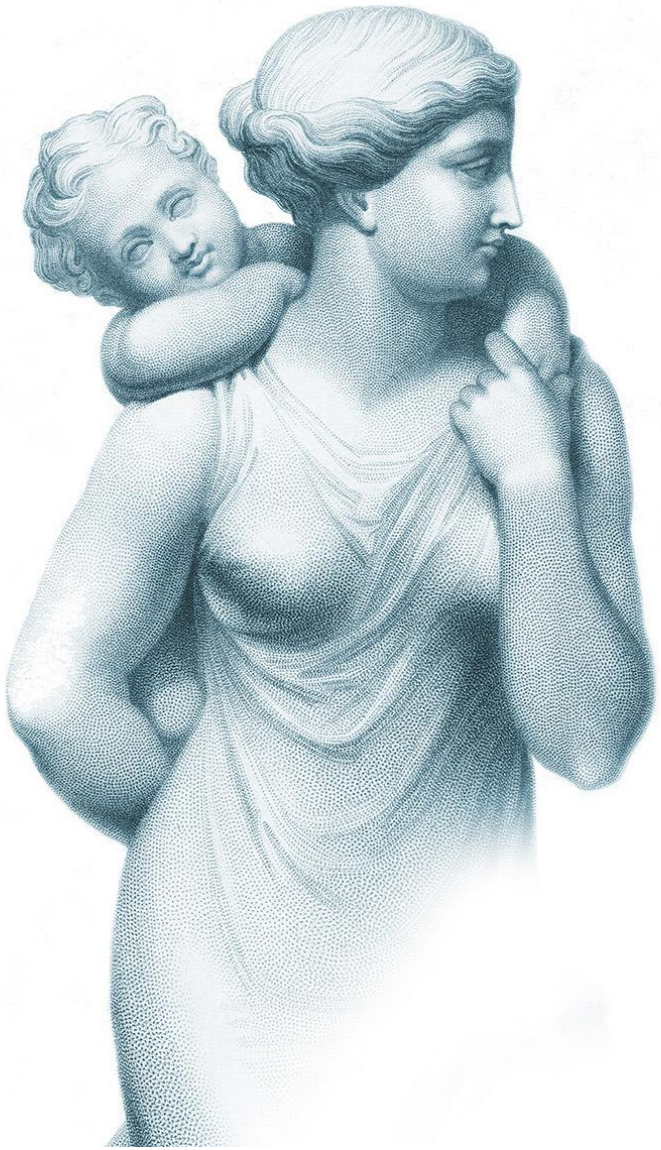

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A modified , real-time technological Delphi study: collaborating with health visitors to develop a new guide for perinatal mental health practice

Catherine Lowenhoff
Catherine.lowenhoff-2015@brookes.ac.uk
PhD student.
Oxford Brookes University
Oxford Institute of Nursing, Midwifery and Allied Health Research
European Academy of Nursing Science.

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Content

- Guidance on conducting a Delphi study
- Basic principles and procedures
- Challenges of conventional Delphi
- Reasons for ‘doing a Delphi’
- Modifications
- Process
- Examples of findings
- Some of the benefits, challenges and limitations of a modified, real-time technological Delphi

Guidance on conducting and reporting of Delphi studies (Jünger et al, 2017).

Rationale for the choice of the Delphi technique
The reasons for choosing the Delphi technique must be justified.
Planning and Design
Any modifications must be clearly explained and applied systematically and rigorously. Consideration should be given to an a priori criterion for consensus (unless reasons can be given to explain why this is not needed).
Study conduct
All material provided to the expert panel should be carefully reviewed and piloted in advance in order to prevent bias. Researchers need to take measures to avoid influencing the judgements of the expert panel. Consensus does not necessarily imply the 'correct' answer. Stable disagreements also provide iinformative insights. The final draft of the resulting guidance should be externally validated.
Reporting
The purpose of the study should be clearly described and the rationale for using the Delphi technique clearly explained. Criteria for selection of experts should be reported. The methods employed need to be comprehensible. A flow chart should clearly illustrate the stages of the Delphi process. Methods for achieving consensus/ dealing with non-consensus must be comprehensible. Reporting of results for each round is recommended. Limitations and implication for interpretation of outcomes must be discussed. The conclusions should reflect the outcomes of the study including the scope and applicability of the resulting practice guidance.

4 basic principles of a Delphi technique

- Anonymity
- Iteration
- Controlled feedback of responses to all group members
- Statistical aggregation of individual's responses

Belton et al (2019)

Planning & Design

Conventional Delphi (part 1)

- Delphi studies usually commence with the generation of categories or questions by a group of experts or from a systematic review of the literature or other sources of evidence.
- These items are then sent to an identified group of experts (via mail or email) who score or rank the items.
- The researcher collates the returned responses and then sends the ranked / scored items back to each of the experts so that they can see how their response compares to the aggregated responses from the rest of the expert panel.
- This exercise is repeated over a predetermined number of rounds or until a pre-specified level of consensus is reached (Williams and Webb, 1994).

Planning & Design

Conventional Delphi (part 2)

- The optimum number of rounds required to maintain engagement of participants is 2-3, with 2 rounds considered sufficient when the items are prepared in advance by the researcher e.g from literature reviews (Trevelyan & Robinson, 2015).
- Whilst there are variations in the definition of consensus, the expectation is usually that at least 70% of panelists concur that the item (whatever it is) should be included.

Challenges of conventional Delphi technique

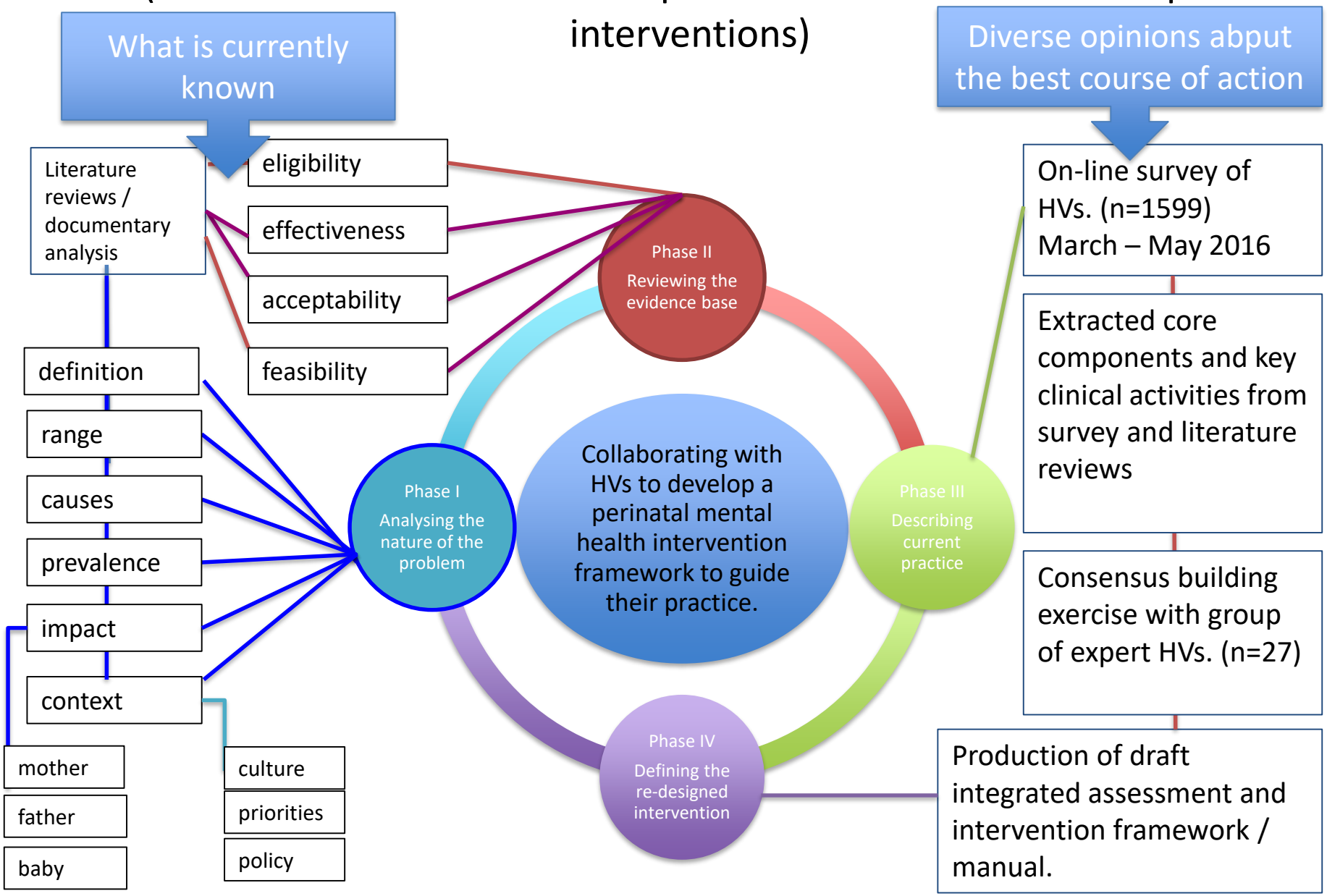
Deciding on the size and composition of the ‘expert’ group.
The potential for the production of an unmanageable number of items if these items are generated by the participants
Limited opportunities for critical exploration of participants’ expectations of the outcome
Participant uncertainty regarding whether their contribution will make a difference
Variable interpretation by the participants of the items under consideration with limited or no opportunities for clarification and discussion
Lack of individual accountability for the views expressed that might predispose to poorly considered or flippant contributions
The delay between rounds of responses that can undermine motivation and participation and leads to high rates of attrition and
Concern that the process stifles innovation and potentially leads to an outcome that represents conformity to the norm rather than the ‘best’ option.

(Goodman, 1987; Foth et al, 2016)

Reasons for choice of Delphi method

- The central premise of the Delphi method is the use of experts to generate consensus when there is insufficient or conflicting evidence and diverse opinions about the best course of action to take (Fletcher & Marchildon, 2014).
- ‘The primary function of the Delphi method is to explore an area of future thinking that goes beyond the currently known or believed.’ (Iqbal & Pipon-Young, 2009. p 599)

My Research:
A multi-phase mixed methods study
(MRC Guidance for the development and evaluation of complex interventions)



Aim of this Delphi approach

- To generate agreement from a group of expert HVs regarding the components that should be included in a HV-led perinatal mental health intervention.

Modifications
1. Seeking agreement rather than consensus

- Linstone and Turoff (2011) propose that the Delphi approach is a structured communication process designed to facilitate collaborative learning rather than to force consensus.
- It has been argued that ‘awareness raising and the collective and consultative process itself is equally or possibly even more important than the outcome’ (Guzys et al, 2015 p.11).
- From a Gadamerian philosophical perspective the purpose of the Delphi method is to acknowledge divergent views, facilitate reflection, develop insight and generate new understanding so that the end result represents a ‘fusion of horizons’ between the researcher, the existing literature and the panel of experts (Guzys et al, 2015).

Modifications
2. Face-to-face feedback

The principle modification involves the use of an audience response voting system that allows for real-time, face-to-face, semi-anonymised voting (Aw et al, 2016).

Avella (2016) maintains that anonymity and feedback are the two main characteristics of Delphi studies.

Keeney et al (2011) state that there are both advantages and disadvantages to anonymity and that it is not required in a modified Delphi approach.

McKenna (1994), who used one-to-one interviews in the first round of Delphi study, felt that nurturing the relationship with the participants increased the likelihood of ongoing commitment.

In non real-time, non face-to-face studies involving several rounds of participant involvement there are often high attrition rates so the benefit of feedback is lost (Trevelyan & Robinson, 2015).

Providing an opportunity to discuss rather than ignore disagreements may help to retain dissenters and avoid the creation of artificial consensus amongst the remaining panelists (Fletcher & Marchildon 2014; Brady, 2015).

Participants

- An established group of expert HVs (n = 27), all members of the IHV North East England perinatal and infant mental health network, were recruited to participate in a collaborative, systematic consideration of the conceptual framework and the potential constituent elements of the proposed model of care (the re-designed LV intervention).
- There are a range of suggestions regarding the optimum number of experts that should be include in a Delphi exercise although smaller panels (15 – 30) are acceptable for homogenous groups (Clayton, 1997)

Data collection

- Over a period of six 3 hour face-to-face meetings distributed over 18 months between Jan 2016 and June 2017, the expert group of HVs were introduced to the study and presented with powerpoint slides containing summary information regarding the potential components of feasible, acceptable and effective interventions derived from the previous phases of research.
- The first meeting was an introductory session to explain the purpose of the research, provide participant information sheets and secure written consent.
- Meetings 2-4 provided opportunities for voting.
- Meeting 5 was for presentation of the findings, in the form of a guide for practice, to the group of experts.
- Meeting 6 was to glean feedback from the experts who had shared the guide with their work-based colleagues.

Procedure

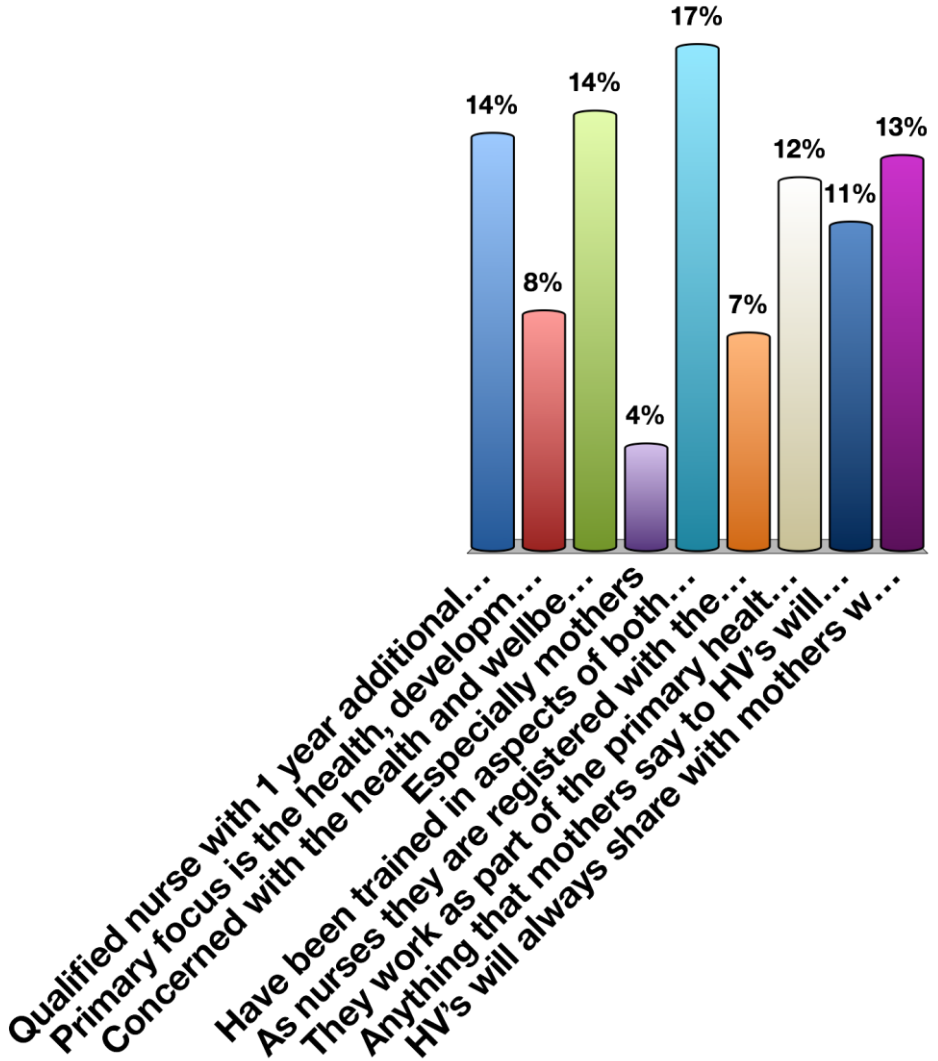
- Questions seeking participants' views about potential intervention components were linked to audience response voting pads.
- Each participant was given a voting pad and votes were registered electronically for all the questions.
- The response distribution for each question was re-presented to the expert group for review and re-voting at the subsequent meeting. Consensus was pre-set at 70%.
- At the first meeting participants were also given an exercise book to record any additional anonymous comments or thoughts.

Data analysis

- Responses to the questions posed were automatically recorded as frequency distributions by the Turning point technology software.

1. What do you think are the key elements that HV's should include when introducing themselves for the first time ?

A. Qualified nurse with 1 year additional training
B. Primary focus is the health, development, well-being and safety of all children under 5
C. Concerned with the health and wellbeing of all family members
D. Especially mothers
E. Have been trained in aspects of both physical and emotional well-being so mothers can talk to them about anything that they are worried about
F. As nurses they are registered with the NMC and therefore bound by a code of conduct and a duty of care
G. They work as part of the primary healthcare team and have connections with Children's Centres
H. Anything that mothers say to HV's will be treated in strictest confidence unless there is risk of harm
I. HV's will always share with mothers what they are doing and why



1st Delphi meeting Nov 2016

What do you think are the key elements that HV's should include when introducing themselves for the first time ? (Multiple Choice – Multiple Response) Active participants (n=24)	%	No.
Qualified nurse with 1 year additional training	13.77	19
Primary focus is the health, development, well-being and safety of all children under 5	7.97	11
Concerned with the health and wellbeing of all family members	14.49	20
Especially mothers	3.62	5
Have been trained in aspects of both physical and emotional well-being so mothers can talk to them about anything that they are worried about	16.67	23
As nurses they are registered with the NMC and therefore bound by a code of conduct and a duty of care	7.25	10
They work as part of the primary healthcare team and have connections with Children's Centres	12.32	17
Anything that mothers say to HV's will be treated in strictest confidence unless there is risk of harm	10.87	15
HV's will always share with mothers what they are doing and why	13.04	18

How many visits should be included in a HV package of care and how should they be offered? (1 option)

A. 8

B. 6

C. 4+4

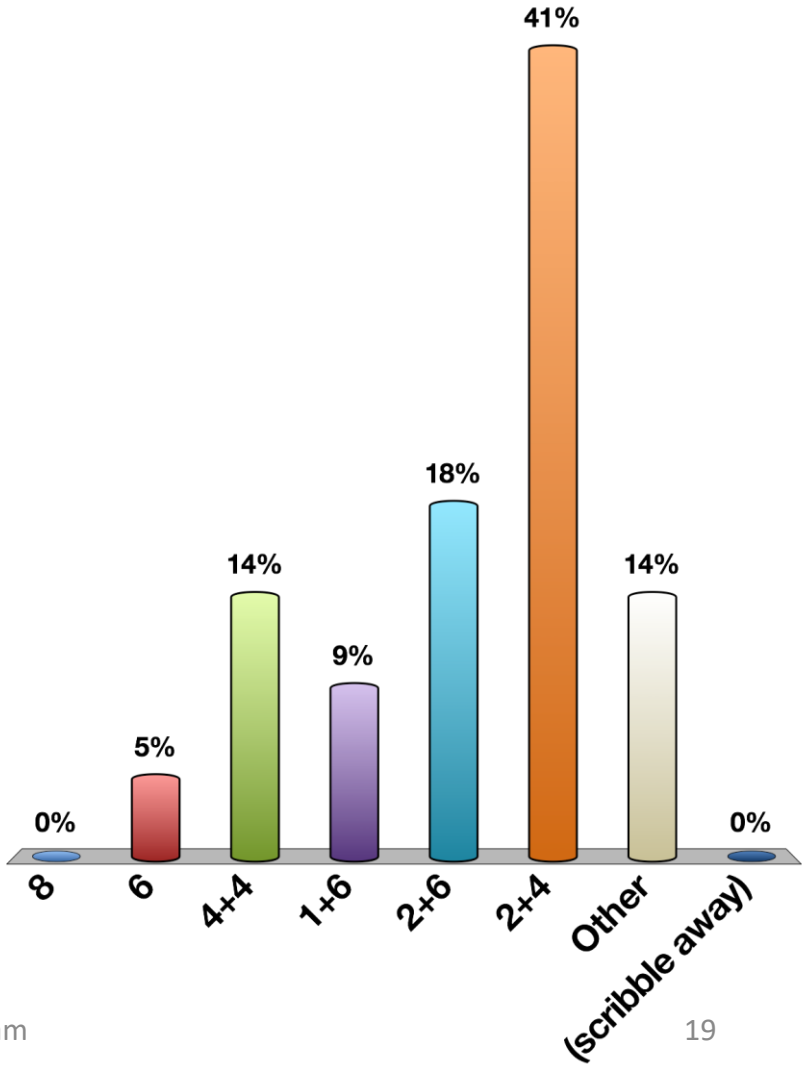
D. 1+6

E. 2+6

F. 2+4

G. Other

(scribble away)



1st Delphi meeting Nov 2016

How many visits should be included in a HV package of care and how should they be offered? (1 option) (Multiple Choice) Active participants (n=22)	**%**	**No**
8	0	0
6	4.55	1
4+4	13.64	3
1+6	9,09	2
2+6	18.18	4
2+4	40.91	9
Other	0	0

Benefits (1)

- Most HVs do not have sufficient time to explore the literature that informs the multiple facets of their practice;
- Findings from the survey indicated that many of the respondents were uncertain about the evidence-based provenance of the intervention they were offering to mothers with MHPs;
- The lack of clarity and agreement about the purpose, content and frequency of the intervention HVs were offering meant that HVs did not feel competent or confident in what they were doing or the outcomes expected or achieved;
- A real-time technological Delphi study provided an opportunity to share and discuss evidence-based information on feasibility, acceptability and effectiveness and ensure that the guide for practice was compatible with the professional ethos of HVs and supported the concepts of informed choice, shared decision –making and family-centred care.

Challenges

- As every mother is unique and health visitors have different backgrounds, skillsets and expectations, useful information indicated by ‘outliers’ during the voting process may be rejected.
- Effective evidence-based interventions may be rejected because they are not in common use.
- Health visitors may subscribe to the importance of specific components but may not be able to deliver them according to the proposed framework owing to constraints imposed by their working conditions eg workforce shortages, conflicting priorities.

Limitations of the Delphi process

- Face-to-face contact is time consuming, resource intensive and imposes limitations on the number of participants with the consequent risk of compromising the generalisability of the findings;
- The principle of anonymity is partially undermined; participants may be influenced by the views of others;
- There is a risk that all participants agree that all of the components discussed should be included in an intervention framework creating potential challenges for training and implementation.

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