Title: Using the TIDieR checklist to describe health visitor support for mothers with mental health problems: analysis of a cross-sectional survey.

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Abstract

At least half of the 20% of mothers who experience mental health problems (MHPs) during pregnancy or after birth are not receiving the help they need that will lead to recovery. In order to identify where improvements need to be made it is necessary to describe exactly what is being done and the barriers and facilitators that compromise or enhance optimal care. The majority of mothers experience mild to moderate anxiety or depression. The expectation is that primary care professionals, such as health visitors (HVs), can provide the support they need that will lead to recovery. The aim of this study was to explore the views of HVs regarding the content and purpose of an intervention to support mothers with MHPs, described as ‘listening visits’ (LVs). A link to an on-line survey was offered to the members and champions of the Institute of Health Visiting (n=9,474) March – May 2016. The survey was completed by 1599 (17%) of the target population, of whom 85% were offering LVs. The Template for Intervention Description and Replication (TIDieR) checklist was used to provide a framework to describe commonalities and variations in practice. There appeared to be a shared understanding of the rationale for LVs but a lack of agreement about what the intervention should be called, the techniques that should be used and the duration, frequency and expected outcomes of the intervention. Contextual factors such as staff shortages; conflicting priorities; the needs and circumstances of mothers; the capability and motivation of HVs; inadequate training and supervision; and absence of clear guidance contributed to variations in perceptions and practice. There are many ways in which the HV contribution to the assessment and management of mothers with MHPs could be improved. The intervention delivered by HVs needs to be more clearly articulated. The contextual factors influencing competent and consistent practice also need to be addressed.
**Key Words**: health visiting practice, assessment and care management, public health nursing, women’s mental health, common mental health problems, complex interventions.

**What is known about this topic**

- Maternal mental health problems affect 20% of women and can have lasting repercussions for the mother, her partner and her baby.

- Half of mothers with mental health problems are not being identified or not receiving the help they need that will lead to recovery.

- Primary care professionals, such as health visitors, should be able to provide appropriate support to mothers who experience mental health problems.

**What this paper adds**

- The TIDieR checklist is a useful framework for exposing variations in health visitor led perinatal mental health practice.

- Training, supervision, guidance and systems to support health visitors and measure treatment adherence, competence and outcomes need to be improved if variations in practice are to be addressed.
Introduction

Perinatal mental health problems refer to the emergence or persistence of any maternal mental health problem (MHP) during pregnancy or the year following childbirth. At least 20% of women are affected worldwide although prevalence estimates vary according to the timing of the assessment and the diagnostic measures used (O’Hara and Wisner 2014).

Perinatal mental ill-health has a complex, multifactorial aetiology and represents a significant public health issue because of the potentially lasting and adverse consequences for the mother, baby and wider family (Letourneau et al. 2012). The adverse effects on the infant include emotional and behavioural problems during childhood, MHPs during adolescence, and mental and physical difficulties in later life (Lewis et al. 2014, Prescott & Logan 2016), imposing a significant economic burden on society (Bauer et al 2014).

The most common perinatal MHPs are depression and anxiety (National Institute for Health and Care Excellence (NICE) 2014). These are often comorbid with each other (Biaggi et al. 2016) or overlap with more complex or severe disorders (Vigod et al 2016). Other MHPs, such as Obsessive Compulsive Disorder (McGuinness et al. 2011) and Post Traumatic Stress Disorder (Dikmen-Yildez et al. 2017) are sometimes misdiagnosed as depression and can affect both parents in the perinatal period.

Although the majority of women experience symptoms of anxiety or depression, any clinician responsible for their care has to be aware of potential comorbidities, a diverse range of mental illnesses, and the increased vulnerability of women to rapid
deterioration in mental state or sudden onset of serious symptoms (NICE 2014, Brummelte & Galea 2016, Higgins et al. 2017).

Accurate assessment is difficult because mothers may present with transdiagnostic (McGorry et al. 2018) atypical (Coates et al. 2015), socially unacceptable (Jarrett 2017) or subclinical symptoms (Kingston et al. 2018), or may not want to talk about how they feel, as they fear involvement of social services (Dennis & Chung-Lee, 2006, Fonseca et al. 2015). The assessment tools used may deter women from disclosure as they do not accurately represent the symptoms that mothers are experiencing (Russell et al. 2017, Littlewood et al. 2018). The overlap between the signs and symptoms of mental illness and the perceived inevitable consequences of looking after a new baby such as fatigue, anxiety and social withdrawal (Oddy et al. 2009, Bilszta et al. 2010) can compromise the ability of both mothers and health professionals to recognize MHPs. After childbirth mothers may also experience persistent physical health problems, which can affect their mental state (Giallo et al. 2017).

There are therefore inherent challenges in identifying mothers with MHPs as many of the symptoms that mothers experience are associated with the biopsychosocial changes associated with the transition to parenthood and the physical repercussions of childbirth (Parfitt & Ayers 2014; Franks et al, 2017; Giallo et al, 2017). Interventions need to take into account these multiple aetiologies as well as respond to the needs, preferences, and circumstances of mothers, and address the potential adverse impact of maternal mental ill-health on other members of the family (NICE 2014).
Partners of depressed mothers are more likely to become depressed themselves (Don and Mickelson, 2012). They may also experience MHPs regardless of maternal mental state (Paulson and Bazemore, 2010). When both parents are depressed this has a mutually reinforcing effect and multiplies the potential for the adverse impact on the child (Letourneau et al, 2012). Assessments and interventions therefore need to take into account the mental health of both parents and the dynamic influence of family relationships on interactions and outcomes for the mother, the partner and the baby. It is not yet common practice to routinely assess and respond to the mental health needs of partners (Baldwin and Bick, 2018). This aspect of family well-being was not included in the survey questions or subsequent analysis (although it should have been).

During the perinatal period mothers usually have frequent contact with health services. Midwives, GPs and HVs are the primary care professionals most likely to identify mothers with MHPs and help them to access effective interventions (National Collaborating Centre for Mental Health (NCCMH) 2014 ). However, 50% of women are not getting the help they need to facilitate recovery (Henderson & Redshaw 2013; Cox et al 2016,). This is acknowledged as a global issue. Brockington et al. (2017, p 114) refer to ‘pregnancy and its aftermath’ as ‘the most complex event in human experience’ and lament the fact that no country in the world makes adequate provision for the mental well-being of mothers and infants. In order to improve provision in the future, it makes sense to examine current practice.

Background
In the UK, HVs are responsible for assessing the health and well-being of families during a number of universal mandated contacts from pregnancy until the child is two (Department of Health (DoH) 2009). Maternal mental health is designated as one of six high impact areas where HVs can make the most difference to health outcomes for pre-school children and their families (Public Health England (PHE) 2016). HVs are expected to assess maternal mental health at every contact that they have with mothers and offer a range of options of support if needed (NICE 2014). One of the options they can offer is an intervention described as ‘listening visits’.

HVs have been offering LVs to mothers with postnatal depression since 1989 (Holden et al. 1989). The original LV protocol specified that HVs should use non-directive counseling techniques during 8 weekly home visits to explore maternal thoughts, feelings and concerns, in order to help the mother to explore and enact acceptable solutions to her MHPs (Holden et al. 1989). Since 1989, interventions offered by HVs, which may or may not be called LVs, have evolved to incorporate a range of different techniques (Appleby et al. 2003, Morrell et al. 2011, Lyon et al. 2013, Institute of Health Visiting (IHV) 2014, Cummings & Whittaker 2016) and to respond to the needs of the mother, the baby and the relationship between them (Appleby et al. 2003, Cooper et al. 2003, Lyon et al. 2013). Variations in the frequency and number of visits required, delivered or acceptable to mothers have been reported (Gerrard et al. 1993, Morrell et al. 2009, Sharp et al. 2010). Qualitative surveys have revealed variations in the feasibility and acceptability of LVs to both the HVs expected to deliver them, and the mothers receiving them (Shakespeare et al. 2006, Slade et al. 2010, Cummings & Whittaker 2016).
The LV intervention was recommended in the original NICE guideline for antenatal and postnatal mental health (NICE, 2007a). However, it was not recommended when the guideline was updated (NICE 2014). There is an expectation that services should be commissioned and funded based on NICE guideline recommendations. It is unclear what impact the guideline’s changes have had on the perceptions and perinatal mental health practice of HVs, or how HVs are supposed to enact their delivery of the high impact area, maternal mental health, if they are no longer offering LVs.

There are therefore many reasons why it is important to explore the perspectives of HVs regarding the support they provide to mothers with MHPs. As it can take three years for recommendations from NICE guidelines to be incorporated into practice (NICE, 2007b), LVs are the appropriate focus for a 2016 survey of current activity.

The study

Aims

The aims of this study were:

- To explore the views of health visitors regarding the concept, content and purpose of LVs.
- To use the TIDieR checklist to describe the components of LVs.
- To identify commonalities and variations in practice in order to develop recommendations for future practice.

Design

Cross-sectional survey.
Participants

Participants were members and champions registered with the Institute of Health Visiting (IHV) (n=9,474). The IHV’s vision is to raise standards in health visiting practice to improve outcomes for children and families. Any HV practitioner can become a member of the IHV. To become a champion, HVs with a special interest in perinatal and/or infant mental health are required to attend and cascade training to other health professionals.

Data collection

Data was collected using an anonymous, on-line, self-completion questionnaire located on the Qualtrics survey platform (Qualtrics 2016). The IHV provided a link to the survey March - May 2016. Surveys remained open for 1 month. Repeat invitations to participate were sent by the IHV to all potential respondents on three occasions during the two months after the initial invitation. HVs attending meetings with the main investigator (xx) during that time were offered the option of postal return of a pen/paper survey. Postal responses were entered manually onto the Qualtrics platform.

Validity

Content validity. The questions included in the survey were informed by discussions with HVs; a review of the literature; the requirements specified by the updated NICE guideline regarding the delivery of psychological/psychosocial interventions (NICE 2014); the briefing paper issued by the IHV in response to the NICE guideline (IHV, 2014); and the 12 domains of the Theoretical Domains Framework (TDF) (Michie et al 2005). The TDF has been used in a broad range of studies as a mechanism for
systematically examining determinants of practice (Francis et al 2012). The TDF represents a synthesis of 128 constructs from 33 psychological theories grouped into 12 domains (Table 1).

**Table 1. Domains of the Theoretical Domains Framework (Michie et al, 2005)**

<table>
<thead>
<tr>
<th>No</th>
<th>Domain</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Knowledge</td>
</tr>
<tr>
<td>2</td>
<td>Skills</td>
</tr>
<tr>
<td>3</td>
<td>Social /professional role and identity (self-standards)</td>
</tr>
<tr>
<td>4</td>
<td>Beliefs about capabilities (self-efficacy)</td>
</tr>
<tr>
<td>5</td>
<td>Beliefs about consequences(anticipated outcomes/attitude)</td>
</tr>
<tr>
<td>6</td>
<td>Motivation and goals (intention)</td>
</tr>
<tr>
<td>7</td>
<td>Memory, attention and decision processes</td>
</tr>
<tr>
<td>8</td>
<td>Environmental context and resources</td>
</tr>
<tr>
<td>9</td>
<td>Social influences (norms)</td>
</tr>
<tr>
<td>10</td>
<td>Emotion</td>
</tr>
<tr>
<td>11</td>
<td>Behavioural regulation</td>
</tr>
<tr>
<td>12</td>
<td>Nature of the behaviours</td>
</tr>
</tbody>
</table>

**Face validity.** A link to the test version of the survey was sent to 17 associates with varying levels of experience in health visiting, perinatal mental health and research to check relevance, readability and ease of completion. A number of amendments were made in response to feedback.

The final version of the survey included 40 questions distributed over 5 sections:

Health visitors and mental health (6 questions); Training in perinatal mental health (3 questions); Listening Visits (18 questions); The Future – your views matter (6 questions); About you (7 questions). A variety of question formats were used including binary, Likert, matrix, semantic differential and multiple choice. 9 of the 40 questions were open-ended questions.
Reflexivity

The lead researcher has been actively engaged in clinical practice, policy development and research relating to perinatal and infant mental health for over 20 years. Whilst objectivity in this research study is pursued through the use of a systematic approach and a standardised framework, it is inevitable that researcher knowledge and understanding will influence, and be influenced by, the research process. In the context of Gadamerian hermeneutics this is regarded as an asset: enhanced understanding is generated by maintaining an open-mind to the meaning of different perspectives that can, in turn, foster original thinking and facilitate the generation of alternative solutions to challenging issues (Greenhalgh et al, 2017).

Ethical considerations

The study was approved by the Faculty Research Ethics Committee (FREC study number 2014/58). All participants were provided with information about their rights and were required to confirm consent to participate either in writing (for completed postal questionnaire) or by ‘clicking’ on the appropriate button of the on-line survey.

Data analysis

Tableau software was used to provide a map of the geographical distribution of respondents. The quantitative responses are presented as proportions. The high volume of free text responses from survey respondents was not anticipated and necessitated a more robust and systematic approach to analysis. The depth and diversity of the comments adds contextual richness to the quantitative findings and, as Creswell et al (2011) suggest, also helps to limit researcher interpretation bias.
The qualitative analysis encapsulates the 3,569 responses to the open-ended questions. The free text responses (100,000 words +) were examined by all members of the research team and then imported into the NVIVO11 software platform for content analysis. Following familiarization with the data, the main investigator (xx) coded the data. The TDF provided the framework for the deductive analysis (tables 1). Inductive analysis was also conducted to allow themes, not within the TDF to be identified (Vaismoradi et al 2016). On completion of coding of the first two open-ended questions (n=960 responses), the process and coding logic were reviewed by the research team. xx and xx undertook further independent coding of the remaining responses, followed by collaborative review. The Template for Intervention Description and Replication (TIDieR) checklist was used to systematically categorise the high volume of responses included in the TDF domain ‘The nature of the behaviour’ and the theme ‘definition of LVs’ emerging from the inductive analysis. Both quantitative and qualitative findings relevant to the categories of the TIDieR checklist are presented in this paper.

The Template for intervention Description and Replication (TIDieR) checklist.

Concerns have been expressed about the waste of money spent on research that is not ultimately used to inform clinical practice. Several reasons account for the lack of clinical utility of the research including inappropriate question selection, lack of acknowledgement of previous research, suboptimal reporting and inadequate description of interventions (Ioannidis et al, 2014). The TIDieR checklist was developed to improve the reporting of interventions in order to ensure accurate replication and subsequent sustainability of interventions (Hoffman et al, 2014).
The 12 items included in the TiDIE checklist (Table 2) were agreed as a result of an international consensus exercise and developed as an extension to the CONSORT and STROBE guidelines.

**Table 2. The TiDIE checklist (Hoffman et al, 2014)**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Brief name or phrase that describes the intervention.</td>
</tr>
<tr>
<td>2.</td>
<td>(Why): Rationale, theory or goal of the elements essential to the intervention.</td>
</tr>
<tr>
<td>3.</td>
<td>(What materials): Describe any physical or informational materials used in the intervention, including those provided to participants or used in intervention delivery or in training intervention providers.</td>
</tr>
<tr>
<td>4.</td>
<td>(What procedures): Describe each of the procedures, activities, and/or processes used in the intervention, including any enabling or support activities.</td>
</tr>
<tr>
<td>5.</td>
<td>(Who provided): For each category of intervention provider (for example, psychologist, nursing assistant), describe their expertise, background and any specific training given.</td>
</tr>
<tr>
<td>6.</td>
<td>(How): Describe the modes of delivery (such as face to face or by some other mechanism, such as internet or telephone) of the intervention and whether it was provided individually or in a group.</td>
</tr>
<tr>
<td>7.</td>
<td>(Where): Describe the type(s) of location(s) where the intervention occurred, including any necessary infrastructure or relevant features.</td>
</tr>
<tr>
<td>8.</td>
<td>(When and how much): Describe the number of times the intervention was delivered and over what period of time including the number of sessions, their schedule, and their duration, intensity or dose.</td>
</tr>
<tr>
<td>9.</td>
<td>(Tailoring): If the intervention was planned to be personalised, titrated or adapted, then describe what, why, when, and how.</td>
</tr>
<tr>
<td>10.</td>
<td>(Modifications): If the intervention was modified during the course of the study, describe the changes (what, why, when, and how).</td>
</tr>
<tr>
<td>11.</td>
<td>(How well (planned)): If intervention adherence or fidelity was assessed, describe how and by whom, and if any strategies were used to maintain or improve fidelity, describe them.</td>
</tr>
<tr>
<td>12.</td>
<td>(How well (actual)): If intervention adherence or fidelity was assessed, describe the extent to which the intervention was delivered as planned</td>
</tr>
</tbody>
</table>

**Results**

**Respondents**

The response rate was 17% (1,599/ 9,474 respondents). Work postcodes indicated a broad geographical distribution of respondents across England, with a small number from Scotland and Wales.

The year of HV qualification ranged from 1971 – 2017. 28 % of respondents had less than three years of experience as a HV; 22% were community practice teachers; 14%
were perinatal and infant mental health champions; 7% were registered mental health nurses; 21% had a Masters degree; 22% had an additional qualification relevant to assessing and managing maternal MHPs.

Responses

Preliminary questions explored HV views about LVs (fig 1). As not all respondents responded to every question, the total number of respondents per question is provided.

**Figure 1: Health visitor views about 'listening visits'.**

- I have a clear understanding of what is meant by LVs (n=1283).
- I am currently offering LVs to mothers with MHPs (n=1312).
- Delivering LVs are a rewarding part of my practice (n = 1272).
- I always offer LVs as an option of support to mothers with MHPs (n=1279).
- I am confident in my ability to deliver LVs (n=1278).
- I have the necessary knowledge and skills to deliver LVs safely and effectively (n=1277).
- The support provided during LVs leads to improved outcomes for mothers (n=1279).
- I have not received sufficient training in how to deliver LVs (n = 1322).
- I have not received any training in how to deliver LVs (n=1384).
Analysis of responses using the TIDieR checklist

TIDieR checklist item 1: Brief description of the intervention

‘Facilitated self-help’ replaced LVs as the recommended intervention for women with mild to moderate MHPs in the updated NICE guideline (NICE 2014). An IHV (2014) briefing, issued soon after the updated NICE guideline was announced, suggested that the support provided by HVs could be described as ‘facilitated self-help’ as many of the elements included in the LV intervention were compatible with this approach. Survey participants were asked whether they would prefer the intervention they offered to be called ‘listening visits’, ‘facilitated self-help’, or something else. 33% (377/1144) preferred ‘listening visits’, 14%(163 / 1125) preferred ‘facilitated self-help’ and the 358 free text responses regarding the relative merits of different descriptive terms are summarised below.

Respondents suggested that the term ‘LVs’ is acceptable and non-threatening to women, but may give a misleading impression to commissioners and other professionals who do not appreciate the complexity of HV perinatal mental health support. There were also various opinions regarding what is meant by either ‘facilitated self-help’ or ‘LVs’.

Responses indicated that any label needs to be meaningful and acceptable to mothers but not so specific that it makes it difficult for the HV to use additional techniques tailored to the family’s needs. Of particular concern was the inadequacy of existing labels to reflect the skill required by the HV to assess and promote the mother-infant relationship and the baby’s emotional well-being.
TIDieR checklist item 2: Rationale, theory or goal of the elements essential to the intervention.

Hoffman et al (2014) suggest that it is important to specify the components of complex interventions in order to differentiate between essential and optional elements. Survey participants were asked to indicate the components that they thought should be included in a HV intervention (Fig 2).
The free text comments expanded on the need to help mothers understand and cope with the potentially overwhelming experience of the changes that happen in their lives as a result of having a baby and how those changes might affect their thoughts, feelings, behaviour, physical well-being, self-care and relationships. Respondents described the skills of the HV as being able to listen in a sensitive and empathic
manner; ‘normalizing’ the experience of psychological distress; enhancing maternal self-efficacy; reducing anxiety and ruminatory thinking; lifting mood; instilling hope; and increasing maternal capacity to cope, develop a more positive outlook and engage with social networks.

LVs were seen as an opportunity to provide support and ongoing assessment to mothers identified with sub-threshold symptoms or mild to moderate presentations of MHPs; those who did not reach the referral threshold for, or did not want, more specialist support; and those on a waiting list for support from other agencies. Respondents felt that HVs played an important role in preparing mothers worried about the stigma of having a mental illness to access appropriate and acceptable treatments.

**TIDieR checklist item 3: Physical or informational materials used in the intervention.**

20% (240/1190) respondents had a manual/guidance to inform their practice with regard to the support they provided to mothers with MHPs, and 95% (228/240) of these found it useful. 72% (904 / 1251) respondents wanted access to a manual on how to do LVs.

Respondents cited a number of resources used either during, or to inform, the intervention. These included resources to assess and promote maternal emotional well-being, manage symptoms, assess and promote positive mother-infant interactions, and optimize child-development and infant mental health.
TIDieR item 4: Procedures, activities and processes used in the intervention

Survey participants were asked if they used any of the models and techniques mentioned in the IHV briefing paper (IHV, 2014) in their work with mothers with MHPs (see Fig 3).

Some respondents felt strongly that only non-directive counseling techniques should be used, as they were the techniques espoused in the original LV protocol (Holden et al, 1989). Some were concerned that untrained HVs offering a LV intervention were in danger of causing harm to mothers by perpetuating ruminatory thinking. Others felt that a more eclectic mix of techniques was appropriate.

<table>
<thead>
<tr>
<th>Model/Technique</th>
<th>Not at all</th>
<th>Occasionally</th>
<th>Frequently</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive Behavioural Techniques</td>
<td>723</td>
<td>488</td>
<td>191</td>
</tr>
<tr>
<td>Facilitated / guided self-help</td>
<td>440</td>
<td>614</td>
<td>339</td>
</tr>
<tr>
<td>Family Partnership Model</td>
<td>897</td>
<td>275</td>
<td>228</td>
</tr>
<tr>
<td>Mindfulness Techniques</td>
<td>642</td>
<td>519</td>
<td>227</td>
</tr>
<tr>
<td>Motivational Interviewing</td>
<td>253</td>
<td>533</td>
<td>612</td>
</tr>
<tr>
<td>Non-Directive Counselling Techniques/ Person-centred...</td>
<td>205</td>
<td>401</td>
<td>797</td>
</tr>
<tr>
<td>Promotional Interviewing</td>
<td>505</td>
<td>416</td>
<td>464</td>
</tr>
<tr>
<td>Relaxation Techniques</td>
<td>563</td>
<td>578</td>
<td>243</td>
</tr>
<tr>
<td>Solution Focussed Therapies</td>
<td>612</td>
<td>472</td>
<td>296</td>
</tr>
<tr>
<td>Techniques to promote mother-infant interactions</td>
<td>68</td>
<td>391</td>
<td>951</td>
</tr>
<tr>
<td>The Solihull Approach</td>
<td>422</td>
<td>352</td>
<td>630</td>
</tr>
</tbody>
</table>

Fig 3: The range of different models and techniques used by health visitors during the support they provided to mothers with MHPs (n=1410).
The adaption of the interaction style and techniques used to the preferences and needs of the mother was viewed as important. Lack of time was frequently mentioned as a limiting factor consequent on conflicting responsibilities and priorities, staff shortages, and unmanageable caseloads.

**TIDieR checklist item 5: Expertise, background and specific training given to intervention provider.**

The majority of respondents thought that HVs should have the necessary expertise to provide support to mothers with MHPs although less than 50% felt that they had received appropriate training (see fig 1).

The training and experience of HVs was considered important in the context of rapid onset and sudden deterioration of maternal mental ill-health and the need for effective liaison with, and prompt referral to, specialist services. It was also suggested that not all HVs have the skills, qualities and motivation to support mothers with MHPs, although in many cases this appeared to be related to the inadequacies of training in terms of quality, content and trainer expertise. Some respondents expressed concern about the adverse consequences arising from delegating LVs to less qualified staff, particularly in terms of the emotional impact on the staff.

Some respondents felt that they were expected to practice beyond the limits of their competence by supporting mothers with complex issues or more serious symptoms because it was often difficult to get referrals accepted by other services. The point was also made that mothers did not always receive the level of support from other services commensurate with recovery and were ‘bounced back’ to the HV’s care.
The general consensus was that as there is no shared understanding of the structure, purpose and content of LVs, it is difficult to devise a suitable training programme. Comments were made that too little time in existing training programmes was dedicated to the discussion and acquisition of skills and techniques needed to confer competence and instil confidence in HV ability to deliver an effective intervention. Other respondents commented on confusion arising from the descriptive term ‘LVs’ with the misguided implication that if it was only ‘listening’ then anybody could do it and no specific training or skills were required.

**TIDieR checklist item 6: Modes of delivery**

The majority of respondents felt that a face-to-face contact was the preferred option because observation of the mother, the baby, and the relationship between them was a vital element of integrated assessment and sensitive support. However, this was not always possible and other options were either imposed on, or implemented by, the HV.

**TIDieR checklist item 7: Location**

Respondents highlighted the difficulties for mothers of having to travel with small babies or attend outpatient appointments without them. Respondents asserted that a home-delivered intervention represented a unique aspect of HV support.

**TIDieR checklist item 8: Timing, duration and frequency of the intervention**
89% (1380/1550) of respondents agreed that their organization had a protocol that specified the actions HVs should take when they identified mothers with MHPs; 87% (1048 / 1202) agreed that the term LVs included an offer of 4-6 weekly visits in the first instance. 74% (883/1194) agreed that a LV could also be a stand-alone visit; 63% (747/1195) agreed that each LV is expected to last about 45 minutes.

The free text responses implied that the number, frequency and duration of visits specified in organisational protocols was typically not achievable in practice. Sometimes HVs or mothers determined that more or less visits were needed. Some respondents expressed concern that they did not have capacity to offer LVs to every mother identified with MHPs, or to offer a beneficial number of visits, and were concerned about the inequalities arising from this arbitrary allocation of support.

**TIDieR checklist item 9: Tailoring of the intervention**

Some respondents stated that the core principle of providing family-centred care meant that nearly every element of provision might need to be tailored to the needs, preferences and circumstances of mothers and their families.

**TIDieR checklist item 10: Modifications of the intervention**

It was noted that as maternal mental health outcomes were not included in the suite of key performance indicators (KPIs) used to measure HV activity, LVs become less important than activities attached to KPI’s (e.g. core contacts or safeguarding responsibilities). Lack of priority compromised consistent practice. Modifications of the LV intervention included variations in assessment procedures and intervention
techniques; the purpose, frequency, duration and number of visits; and the outcomes that were anticipated and measured.

**TIDieR checklist item 11: Assessing intervention adherence**

The NICE guideline for antenatal and postnatal mental health specifies that practitioners delivering support to mothers with MHPs should receive regular supervision and that treatment adherence and practitioner competence should be monitored and evaluated (NICE, 2014). With regard to the support that HVs provided to mothers with MHPs: 17% (198/1159) of respondents were confident that there were systems in place to monitor and evaluate treatment adherence; 11% (130/1153) were confident that there were systems in place to measure HV competence; 19% (221/1160) were confident that all HVs in their organisation received high-quality supervision.

**TIDieR checklist item 12: intervention adherence**

As there is no clearly described, universally agreed intervention protocol, and intervention fidelity is not assessed, it is impossible to make any comments in connection with this item.

**Discussion**

The TIDieR checklist was used in this study as a way of systematically categorizing commonalities and variations in the delivery of LVs according to an internationally agreed consensus regarding the essential elements that should be included in descriptions of interventions. Although the checklist has predominantly been used in RCTs to ensure agreement and conformity to an intervention protocol, it has also been
used to highlight where modifications to interventions have occurred (Cotterill et al, 2018). Chambers and Norton (2016) suggest that greater attention should be given to the multiple ways that interventions are adapted to different contextual influences over time, in order to understand the realities and challenges of real world practice, and to potentially identify the characteristics of intervention adaptations that optimize or undermine the achievement of anticipated outcomes. In other words, evidence-based practice should embrace evidence from both practice and research (Chambers and Norton, 2016).

Thematic analysis exposed the repercussions for commissioning, training and delivery arising from multiple interpretations of the meaning of LVs. A clear definition is important when considering the effectiveness of the intervention described in clinical trials or systematic reviews, both from the perspective of describing the intervention and the ‘usual care’ comparator. Without clear definitions, it is not possible to appreciate the differences and similarities between interventions, the heterogeneity of delivery, or to accurately replicate the effective interventions. Findings from trials involving fundamentally dissimilar interventions (with similar names) may be inappropriately included in meta-analyses (Glasziou et al 2014). For example, one of the RCTs (Wiggins et al 2005) included in the meta-analysis used to inform the decision to exclude LVs from the recommendations in the updated NICE guideline (NCCMH, 2014) should not have been included because the LVs described in this intervention were not targeting maternal MHPs.

The majority of respondents agreed about the purpose of LVs (Fig 2). The survey revealed a range of opinions regarding whether one, or many techniques might be
used to inform acceptable and appropriate support that would lead to recovery (Fig. 3). Using a range of techniques is not necessarily problematic as it is the factors that are common to all psychosocial/ psychotherapeutic interventions, rather than specific techniques, that confer benefit (Wampold, 2015). Authors of the original LV intervention emphasized that the development of a confiding relationship was more important than the techniques that were used (Holden et al., 1989).

Collaborative, family-centred care was frequently mentioned by HVs as a guiding principle underpinning the range of support offered and the difficulties experienced in specifying what is going to be included in an intervention when first introduced. This may reflect the need to negotiate the content of the intervention according to the presenting symptoms; maternal readiness to engage with an intervention; availability of preferred treatments; and maternal explanatory models of motherhood, illness and recovery (Owiti et al. 2015, Plunkett et al. 2016).

Ongoing assessment is required to identify and address the diversity of symptoms that mothers may experience that do not ‘fit’ with diagnostic criteria and to explore the range of potentially modifiable risk factors that may undermine maternal emotional well-being. Many of these are inextricably linked with the aftermath of childbirth and the transition to parenthood such as physical health issues, fatigue; breastfeeding difficulties, unsettled infants and partner relationship issues (Haga et al. 2012, Pilkington et al. 2015; Schaffir et al. 2018). Respondents emphasized the need for commissioners and managers to acknowledge the promotion of all aspects of mental and physical health, maternal caregiving capacity, self-care and positive mother-infant
interactions as integral components of a HV intervention aimed at supporting mothers with MHPs.

Inadequate or absent training was highlighted as an issue by 47% and 34% of the respondents respectively (fig 1). It was suggested that this was related to variations in perceptions of the structure, function and purpose of LVs and the limited time allocated to intervention delivery in training programmes. Qualitative surveys of health visitors / public health nurses have highlighted the need for more detailed and relevant training particularly with regard to the recognition and treatment of a broader range of MHPs (not just depression) and the management of risk (Jomeen et al, 2013; Cummings & Whittaker, 2016; Ashford et al 2017; Alexandrou et al, 2018; Higgins et al, 2018).

If HVs do not feel adequately trained to deliver the intervention this could influence the way that they present the intervention to mothers. If the intervention is not clearly described to mothers, or the mothers do not think that the professional offering the intervention has the necessary skillset to be able to help them, then they may not see any value in the intervention. Any ‘talking therapy’ relies on the willingness of the recipient to explore alternative ways of thinking and behaving and allocate time to participate in, and practice between, sessions. Mothers have to believe that LVs will be worth their time and commitment. In the largest ever pragmatic randomized controlled trial of psychological interventions delivered by HVs to mothers with MHPs (the PoNDER trial) (Morrell et al, 2009) nearly a third of the eligible mothers declined the intervention offered by HVs (Morrell et al, 2009). This suggests that training programmes need to emphasise the importance of activating
maternal expectations that the HV has the knowledge and skills to be able to help, and that the intervention offered is likely to culminate in maternally relevant benefits. Maternal perceptions of the HV may also be determined by other contextual factors such as corporate caseloads or staff shortages that limit opportunities to establish a relationship conducive to disclosing sensitive issues (Cowley et al, 2015; Noonan et al, 2016).

A qualitative survey of the women participating in the PoNDER trial found that less than half of the mothers with probable depression were offered an intervention by the HV (Slade et al. 2010). This could indicate that HVs in this RCT, even though they had received detailed training and regular supervision, might not feel competent, confident or comfortable in offering the designated intervention. Acceptability of the intervention to both the intervention provider and recipient is important because it determines engagement and outcomes (Sekhon et al. 2017).

Although respondents acknowledged the existence of protocols specifying the frequency and duration of a LV intervention, comments indicated that these were often not followed, with variations in the number of visits considered necessary, possible to deliver, or acceptable to mothers. It is difficult to assess the effectiveness of an intervention if sub-therapeutic doses of the intervention are delivered. It is also difficult to be precise about how many sessions are needed. In an RCT testing the effectiveness of tailored CBT for mothers with postnatal depression, delivered by psychologists, clinically significant recovery was achieved and maintained for 12 months following the offer of 6 weekly sessions, followed by 5 fortnightly sessions and two booster sessions (Stein et al 2018). The study’s authors concluded that
‘treatments are more likely to be effective when intensive and extended by boosters, and are likely to be particularly acceptable when delivered in mothers’ homes’ (Stein et al 2018 p.135). This reflects the comments of respondents regarding the importance of delivering the intervention in the home and highlights the need to be clear about what level of input achieves sustained reductions in symptoms consistent with recovery.

Respondents commented on mothers being ‘bounced back’ from other services when they had received the maximum number of contacts allowed, but were still in need of extra support. This is unsurprising considering that evidence from Improving Access to Psychological Therapy (IAPT) services, the frequently advocated treatment option, confirms that only 12% of referred patients complete treatment and can be described as ‘moving to recovery’ (Griffiths and Steen, 2013). Whilst not all of the 88% of IAPT patients who do not recover will be those with perinatal MHPs, some of them will be, and this would explain the additional burden described by HVs.

Many of the contextual factors affecting intervention delivery such as time pressures, staff shortages, inadequate training and supervision, a poorly specified intervention and lack of systems for monitoring competence and treatment adherence (Morse et al. 2012), mentioned by survey respondents, not only appear to have a negative impact on the quantity and quality of intervention delivery but have also been associated with staff burnout. Staff burnout results in decreased motivation and poorer interactions with patients and constitutes a further threat to healthcare quality and patient safety (Salyers et al. 2017; Westwood et al, 2017). Interventions that are delegated to less experienced practitioners may also compromise comprehensive assessment, patient
engagement, and intervention effectiveness (Scott, 2018). These could all be reasons why the LV intervention, as it is currently delivered, may not be culminating in universal access to perinatal mental health care and measurable improvements in mental health outcomes.

**Strengths and Limitations**

This survey can only provide a snapshot of the views of HVs who chose to respond. The responses nevertheless expose the variations in perceptions and practice of a broad geographical spread of HVs, with varying levels of experience and expertise. The large volume of free text responses has meant that it has not been possible to refer to the inductive themes identified and to provide sufficient detail about the issues with the largest number of responses (and therefore possibly of greatest significance to respondents), such as education and training.

**Conclusions**

The TIDieR checklist provided a useful framework to systematically categorise the qualitative and quantitative survey responses relating to the description of the LV intervention delivered by HVs. The checklist helped to highlight the modifications / adaptations that have occurred and some of the barriers and facilitators that compromise or enhance delivery. There is an expectation that the TIDieR checklist will be used in study protocols and RCTS to describe interventions. This study was a useful exercise in testing the utility of the checklist in describing current practice.

Whilst it is important to have a succinct description of an intervention, it is apparent that the term LVs means different things to different people and may therefore lead to
misunderstandings amongst HVs, mothers, other health professionals, managers, commissioners and researchers. Given the concerns about LVs raised by both mothers and HVs (Shakespeare et al. 2006, Slade et al. 2010; Lyon et al, 2013; Cummings & Whittaker 2016; Morgan, 2017) and the high rates of attrition or poor recovery (Cooper et al, 2003; Morrell et al, 2009; Sharp et al, 2010) It may be that the time has come to not only consider re-naming the intervention but also to re-design the intervention offered by HVs (Dias et al, 2016).

The implications and challenges of describing and/or designing, implementing and monitoring an integrated, collaborative, multicomponent health visitor - led intervention that is replicable, sustainable, acceptable and effective are evident. Nevertheless, the function and process of the intervention HVs offer must be clearly articulated and preferably incorporated into a manual to guide and standardize practice. Due regard must be given to the quality and quantity of training and supervision. Training needs to be regularly reviewed and updated and delivered by competent trainers who are aware of the personal and contextual factors that enhance or inhibit professional practice (Price et al, 2012). Opportunities for reflection, consolidation of learning, and development and application of skills in clinical practice must be provided. Mechanisms, such as supervision, for assessing motivation, confidence and competence must be incorporated into implementation strategies (Blase and Fixsen 2013).

HVIs need to be given sufficient time to provide the level and quality of support that is needed to confer benefit. In situations where mothers do not want to be referred to specialist services, or when those services are not available, greater emphasis needs to
be given to collaborative care whereby HVs can receive guidance from more experienced perinatal mental health specialists or work alongside them to ensure that the needs of all members of the family, especially the children, are not forgotten. As primary care practitioners who provide a universal service to all families with children under 5, HVs have to respond to any identified mental health needs and, unlike secondary services, are not able to decline referrals or raise referral thresholds when the demand for the service is great. When other services do not have capacity, the HV becomes the default provider. The role of the HV in identifying and supporting women with MHPs should not be underestimated or marginalized. This group of professionals, given appropriate training and support, could play a key role in improving outcomes for the 50% of women with MHPs (Cox et al, 2016) who are currently not able to access the help they need, when they need it.

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