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## Evaluating the audio-diary method in qualitative research

**Iain Williamson, Dawn Leeming, Steven Lyttle & Sally Johnson**

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### **Abstract**

**Purpose:** Audio-diary methods are under-utilised in contemporary qualitative research. In this paper we discuss participants and researchers' experiences of using audio-diaries alongside semi-structured interviews to explore breastfeeding experiences in a short-term longitudinal study with 22 first-time mothers.

**Methodology:** We provide a qualitative content analysis of the participants' feedback about their experiences of the audio-diary method and supplement this with the perspectives of the research team based on fieldwork notes, memos and team discussions. We pay particular attention to the ways in which the data attained from diaries compared with those from the interviews.

**Findings:** The diaries produced were highly heterogeneous in terms of data length and quality. Participants' experiences with the method were varied. Some found the process therapeutic and useful for reflecting upon the development of breastfeeding skills whilst negative aspects related to lack of mobility, self-consciousness and concerns about confidentiality. Researchers were positive about the audio-diary method but raised certain ethical, epistemological and methodological concerns. These include debates around the use of prompts, appropriate support for participants and the potential of the method to influence the behaviour under scrutiny. Interview and diary accounts contrasted and complemented in ways which typically enriched data analysis.

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**Implications:** The authors conclude that audio-diaries are a flexible and useful tool for qualitative research especially within critical realist and phenomenological paradigms.

**Originality:** This appears to be the first paper to evaluate both participants and researchers' experiences of using audio-diaries in a detailed and systematic fashion.

**Keywords:** audio-diaries, breastfeeding, women's health, qualitative content analysis

### Introduction

Diary methods are flexible, heterogeneous, have the potential to yield rich qualitative data and unlike methods which rely on retrospection, offer the potential to ensure that accounts are sequentially ordered and reduce the likelihood of feelings or events being forgotten (Milligan *et al.*, 2005, Mackrill, 2008). Furthermore, as no researcher is present when data are being recorded, participants are able to elaborate on matters of personal salience freely and spontaneously. This may have particular benefits where intimate behaviours are the focus of the research (Breakwell, 2012).

The challenges of diary methods are less widely reported although Alaszewski (2006) outlines some difficulties. He argues that qualitative solicited diaries are a relatively 'expensive' form of data collection as the researcher typically has to design study-specific materials for participants and then provide appropriate training and support for the duration of the period of data collection. Additionally, as diary keeping as a social practice varies both across and within class and cultural groups, selection bias in recruitment to diary-based research is likely. Diary keeping presumes certain skills and motivation and there are individual, structural and cultural differences in comfort with self-narration to be considered (Warin and Muldoon, 2009). Having to record entries regularly over time may lead to participant fatigue and data attrition. Furthermore the researcher has no control over participant selectivity in reporting and certain psychological phenomena may be consistently over or under-reported (Breakwell, 2012).

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Audio, unlike written, word processed or web-based diaries are not commonly used in contemporary qualitative research. However, a relatively small number of articles which describe research in which participants narrate, rather than write (or type), their accounts have appeared in recent years. These include Bernays *et al.*'s (2014) constructions of hope in Serbian people living with HIV, Worth's (2009) research into how visually impaired young people in Britain adjust to adulthood, and Gibson *et al.*'s (2013; 2014) research around identity and inter-sectionality in Canadian young men with Duchenne Muscular Dystrophy. If audio-diaries are used at all, it appears to be more common for researchers to employ them alongside other methods rather than using them independently. Audio-diaries have been surprisingly overlooked as they offer a practical, 'hands-free' method for participants to provide accounts of experience, whilst facilitating data collection in real time and context (Bolger *et al.*, 2003). Economical portable voice recording equipment is widely available and easy to use and data entries can be made whenever and wherever convenient which has particular benefits for those with constrained health and/or mobility (Johnson and Blytheway, 2001). They can also potentially partially address some concerns relating to selection bias in diary studies through facilitating the inclusion of participants with limited manual dexterity or literacy skills.

Because of the lack of currency of audio-diary methods in contemporary research, we have limited sense of how participants engage with the approach. However, Sargeant and Gross (2011) explored in detail how six British young people who were receiving treatment for inflammatory bowel disease responded to recording regular audio-diaries over several months. After initial awkwardness the participants developed a virtual relationship with the researchers through using the diary in a '*continuous conversational sense*' (p. 1365) and came to appreciate the '*immediacy and intimacy*' of the method. The diaries appeared to serve a reflective, therapeutic function for the participants through the provision of a safe space to disclose.

## **Aims of the Paper**

In this article we describe our experiences of using audio-diaries alongside semi-structured interviews in a short-term longitudinal research project which explored first-time mothers' breastfeeding experiences in the postpartum period. The aim of the paper is to evaluate audio-diaries as a method and to explore the implications of their use for collecting qualitative data. Firstly, we discuss our participants' engagement with the diaries and provide a qualitative content analysis of participants' observations about the diary method in their daily accounts along with their responses to specific questions they were asked during interviews. This is followed by researchers' reflections on ethical, methodological and epistemological issues including a comparison of the data collected via audio-diaries with those collected through interviewing. In order to contextualise our commentary on the use of audio-diaries, we begin with a brief description of the study in which they were used.

## **The Study in which the Audio-diaries were Employed**

The study explored the lived experience of breastfeeding amongst first-time mothers in the UK. Whilst there had been previous qualitative research into breastfeeding experiences incorporating written diaries (e.g., Lavender, 2006), we believed that the coupling of audio-diaries with semi-structured interviews would enable us to explore very early experiences of breastfeeding as they unfolded and, as audio-diaries potentially enable mothers to record whilst feeding, facilitate the production of richer experiential data.

The study employed a multi-method, longitudinal design which comprised two phases of data collection, each of a week's duration. In each phase participants were asked to make audio-diary recordings over seven days, and this was followed by an interview. Phase one began as soon as practically and ethically appropriate following the birth of the infant. Participants were provided with a portable mini-disk recorder, an external microphone, a

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mains adaptor, batteries and seven pre-labelled and colour-coded mini-disks. They were shown how to use the equipment, including how to play back, edit and delete recordings, and were provided with some general prompts (e.g. to record how the feeding session was going and how they felt about this). The women were asked to make at least two entries every day, either during or shortly after feeding sessions, and received contact details of the research team. At the end of this period a researcher visited participants to carry out an interview during which they were asked about their breastfeeding experiences and how they had found keeping the audio-diary. Phase two began when the baby was around 21-25 days old and followed a similar procedure. Full participation in the study typically represented involvement over a six week period for the women.

Recruitment to the study took place over a period of approximately six months. Fifty-eight women registered interest with 22 subsequently agreeing to participate at phase one and 11 at phase two. (An additional ten women participated in interviews but did not want to complete daily diaries).

Participants were first-time mothers with singleton infants born at a gestational age of between 38 and 42 weeks without incidence of significant child or maternal illness. All participants had declared an intention to breastfeed their infants for at least one month.

Participants were between 18 and 38 years of age, living with male partners and from various occupational backgrounds. Thirteen of the 22 were degree-educated. Nineteen described their ethnicity as white, two as African-Caribbean and one as Eurasian. Pseudonyms are used throughout. Ethical approval for the research was provided by both university and regional health authority ethics committees.

### **The Audio-Diary Method: Participants' Engagement and Perspectives**

In this section we provide details of how the participants engaged with the diaries and then provide a qualitative content analysis of their views on this method of data collection. This analysis is based on data the 22 women provided during the first phase of the study when breastfeeding was less well established and the audio-diary method was novel. Our aim here is to discuss participants' reported experiences of keeping the diaries rather than to explore the findings regarding experiences of breastfeeding which are reported elsewhere (e.g. Johnson *et al.*, 2009; Leeming *et al.*, 2013; Williamson *et al.*, 2012).

Participants' use of the audio-diary was heterogeneous in terms of the number, duration and nature of entries they made. Thirteen women made entries on all seven days. The longest diaries exceeded 450 minutes and these were typically associated with mothers recording *during* rather than *following* feeding sessions. Mothers who were experiencing greater difficulties tended to record more fully and frequently. In contrast, entries made by a small sub-set of participants were rudimentary. One woman recorded every day but the diary data totalled 26 minutes. The style of entries of this sub-set of participants was functional with minimal elaboration. Participants who provided short diaries were also typically reserved in interviews, perhaps indicating the salience of their interpersonal style rather than the data collection method. Participants in the mid-range typically recorded between 90 and 180 minutes of data. Interestingly the very considerable variability in the quality and quantity of data provided by participants (and apparent comfort with self-narration) mirrors the experiences reported by Gibson *et al.* (2013) in their study of young men with Duchenne Muscular Dystrophy.

The interviews at the end of the week focused both on participants' experiences of breastfeeding and how they had found keeping the audio-diaries. We also explored the diary data themselves to collect additional observations about the process of diary keeping. To analyse responses we used a form of qualitative content analysis based on the summative

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approach outlined by Hsieh and Shannon (2005). This comprised reading the data thoroughly and subsequently generating content categories inductively from the data. Reliability of coding was checked within the team. We have grouped the responses as positive aspects and negative aspects (see tables 1 and 2). Each category is subsequently discussed with an illustrative extract from the data. We have considered only those content categories which were represented by the responses of at least three participants.

### *Positive Aspects of the Audio-Diaries*

Table one: Positive Responses to the Audio-Diary Method in Order of Prevalence

Response	N
Appreciation of the simplicity of the method	15
Preference for audio-diary over written diary method	8
Cathartic-therapeutic effects	7
Educational-reflective aspects	6
Benefits to mother-baby relationship	3
Capturing experiences as they happen	3
Sense of control over data	3

As can be seen from Table 1, the most common response to the question was that participants found the equipment user-friendly:

*It's been easy to use and I'm a bit of a technophobe, clueless really, but I found it okay. (Emma)*

Several participants spontaneously contrasted the audio-diary method with typed or handwritten diaries and demonstrated a preference for the audio method:



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*You wouldn't be able to keep a written diary, it wouldn't work... I think it is the right way, I mean I don't think I would fancy writing anything and I don't think I would fancy using a computer to send emails. (Deanne)*

Participants who recorded their accounts during rather than after feeding seemed particularly appreciative of the method:

*Writing it down would have been very difficult because you've got your hands full and trying to stay comfortable whereas you can just talk into that [the recorder] and it is very easy. (Erica)*

Being able to provide accounts as feeds occurred (or soon after) was valued by some participants who commented that this ensured that key aspects of their experience were not lost:

*It's probably the best way of doing it because writing down you lose things, you forget things whereas if you are just chatting it seems much more informal and you can just chat away. (Hannah)*

Robin spoke at length about the contrast between giving accounts shortly after feeds and recounting experiences in an interview several days later:

*It's [the audio-diary] an excellent way of picking up information because you forget things otherwise. You discuss it all but already a week later, I'm sort of slightly thinking - "am I making a fuss about how bad that was?" - and I wasn't because I know it was genuinely awful. (Robin)*

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Some participants also spoke of having a sense of personal control over the data collected. Molly felt that her data were less inhibited and more spontaneous:

*I suppose it's quite personal and because nobody else is sort of there you can say what you like really so, you can be quite honest on it whereas if you think it was like interview style you might think about what you are supposed to say. (Molly)*

Therefore generally the participants seemed to be suggesting that the use of audio-diaries enabled rather than inhibited their recounting of their experiences of breastfeeding, especially as this afforded the opportunity to capture experiences contemporaneously.

Participants discussed other benefits. Most commonly, they noted the value of being able to vent their feelings and frustrations, especially when experiencing difficulties:

*It was nice to express my feelings and things like that because there were, you know, some down days and it was good just to let it out and get that off your chest. (Bianca)*

Some participants found it useful to either playback recordings and reflect on previous feedings or use the time to contemplate how breastfeeding was developing.

*It was nice to reflect on what had happened and, instead of that moment was gone and past, you could sit and think, "right well, why did that not go as well as you wanted it to" and "why did it go well?" So it was nice to use that reflection in the next feeding. (Hannah)*

Spending quiet time with the baby was also felt by some participants to benefit the mother-infant relationship. Although no requirement was made for the mothers to record their entries in private, some mothers appeared to appreciate having the 'task' of making entries

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confidentially as it gave them a legitimate reason to spend a solitary and private interlude with the baby:

*It was sort of nice just to have a little space with the little one. (Molly)*

The other perceived benefit related to the baby hearing the mother's voice during the feed:

*It gets you rabbiting away and so she gets to hear your voice constantly as you are feeding which probably isn't a bad thing. (Amelia)*

To summarise, participants reported several positive features of the audio-diary method. These findings suggest that there are particular advantages to the employment of audio-diaries for participants experiencing significant transitions when other methods might be burdensome (Morse, 2009). The participants' appreciation of the method as a means of expressing their feelings and as an opportunity to reflect on and make sense of their experiences suggests that they found the method to be an authentic means of capturing their subjective worlds. Some of our findings resonate with observations made by Sargeant and Gross (2011) about their use of audio-diaries with young people with inflammatory bowel disease. Despite the shorter time-span of involvement for our research, the difference in age of our participants and the fact that they were adjusting to a temporary phenomenon rather than a chronic condition, similar benefits were voiced including the therapeutic and reflexive functions. Another similarity was the way in which many participants utilised the diary as a conversational tool.

### *Negative Aspects of the Audio-Diaries*

Some participants raised reservations about the method. These are listed in Table 2.

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Table two: Negative Responses to the Audio-Diary Method in Order of Prevalence

Response	N
Concerns about rambling/repeating	6
Lack of mobility whilst recording	5
Issues relating to privacy	4

Negative responses about the audio-diaries were relatively few. The most common concern related to participants feeling self-conscious and that their accounts were repetitive. Participants appeared keen to provide the 'right' kind of data and they voiced concerns over a perceived lack of coherence, originality or precision to some of their entries, using terms to describe them such as "*confused and rambling*" (Gina) and "*waffling*" (Caitlin).

The women who adjusted well to breastfeeding in particular felt that their later entries were uninformative:

*I must admit, the longer it went on, I felt sort of like I was running out of things to say.*  
(Imogen)

Whilst women were generally positive about the recording equipment, a number did comment on the restrictions on mobility whilst recording. This was particularly true of participants who preferred to use the mains adaptor rather than batteries, and for those who opted to record during feeds:

*The only mean feat is trying to get a new born baby, yourself and the mini-disc recorder all in one place, but you can usually manage it.* (Nicole)

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A number of participants initially tried to record feeding sessions but moved quickly to making entries shortly after the feed was completed and the baby settled:

*I have done it after I've fed him. I've not done it while feeding because, I tried but I couldn't multi-task I found that talking to the microphone was putting me off and putting him off. (Hannah)*

Another difficulty mentioned by the participants related to privacy and the challenges of making recordings when others were present:

*There have been lots of times when I've been feeding when other people are around and I don't want to record when other people are about. (Emma)*

These data illustrate some important individual differences in how participants responded to providing regular narratives of their experience, and how these responses can change over time. It is also clear that there were some limits to the flexibility of the audio-diary method with participants reporting practical restrictions as to when and where they could record their accounts. Although most women overcame difficulties using the equipment or adapted their use of the equipment to suit their needs, the data suggest that it may be useful to offer participants greater flexibility in how and how often they complete their diaries.

### **Reflections of the Research Team**

#### *Ethical Issues*

Three ethical concerns warrant further discussion as issues that should be addressed in research using audio-diaries. The first of these was capturing the voices of other people on the recordings. In most cases these were family members and it was difficult to ascertain whether they were aware that the recorder was switched on. Because consent was obtained

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from participants only, we have not included any extracts containing statements from other individuals in research articles. However it may be advantageous to consider additional safeguards to address confidentiality concerns in relation to those people who may interact with participants.

A second issue relates to the lack of researcher support whilst diaries are being recorded. Researchers may be unaware of the extent of distress experienced by participants until the diaries have been completed. Given previous research suggesting that some women find difficulties with breastfeeding distressing (e.g. Larsen et al., 2008), we had provided contact details of infant feeding support agencies to participants and a contact number for the researchers. However, no participant spontaneously contacted us during 'diary weeks' although on the recordings several of the women were tearful and demonstrated low affect. It may have been the case that had we been aware of this at the time we would have reiterated the right to withdraw from the study or to skip making entries on more difficult days if participation appeared to be becoming too burdensome.

The final issue has both ethical and methodological elements and relates to what has been called 'reactance'. This refers to a situation where keeping the diary affects the behaviour under investigation (Breakwell, 2012). For example, one of our participants commented in her interview:

*Because I was doing this disc, there was no way I was going to give up, not when I was doing this. No chance. (Imogen)*

The participant stated her commitment to breastfeeding in several diary entries and it is arguably unlikely that she continued to breastfeed primarily because of her research participation. However, it is important to be aware that keeping daily diaries (and pre-scheduling interviews to discuss those recordings) might potentially influence behaviour.

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### *Methodological Issues*

One of the issues that concerned us when developing the study was whether or not to provide the participants with prompts for making entries. Following consultation with researchers, professionals and recent mothers we decided to include some general prompts relating to feeding and the transitions being experienced as a new mother. These prompts were phrased as open questions and are listed in table three below:

Table three: Guidelines for Keeping the Infant Feeding Audio-diary

<p>Where possible, please record your experiences of <b>at least two</b> feeding sessions per day, over the next seven days. If you wish to record more than two feeds, this would be welcomed but is not essential. It is important that you try to <b>record your experience as it happens or soon after</b>, rather than relying on remembering what happened and how you felt, later on in the day/week. <b>Record whatever is important and relevant to you at the time, however trivial it might sound.</b> Take as long as you like to make the recordings.</p> <p><b>For each entry please record:</b></p> <ul style="list-style-type: none"><li>• What is the date and what time of day is it?</li><li>• Where are you feeding?</li><li>• What have you just been doing?</li><li>• Are you alone/what is going on around you?</li></ul> <p><b>Here are some ideas of the kinds of things that you might record but don't feel restricted by this list:</b></p> <p><b>For your first entry:</b></p> <ul style="list-style-type: none"><li>• Please record your experience of feeding your baby since the birth and how you have felt about it. (If it is a few days since your baby was born you may wish to provide a day-by-day account or describe your experiences more generally).</li></ul> <p><b>Issues related to the feed</b></p> <ul style="list-style-type: none"><li>• How is the feed going?</li><li>• How do you feel about this feed? Describe what you are experiencing in as much detail as you can.</li><li>• What are the most pleasurable aspects of this experience and how does this make you feel?</li><li>• What do you dislike or is difficult about this experience and how does this make you feel?</li></ul> <p><b>Issues related to your life more generally</b></p> <ul style="list-style-type: none"><li>• What are you going to do after the feed?</li><li>• Any other comments or reflections e.g. on the day as a whole.</li><li>• How are you finding being a mum and what is it like looking after your baby?</li><li>• What is going on more generally in your life and do how you feel about this?</li></ul>
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It was hoped that the prompts would both help to ensure that the data addressed the aims of the research and would avoid participants becoming anxious about understanding

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what was required of them and what they should say. The prompts were generally well received by participants and were not perceived as prescriptive.

*At the end of the day, although you set us kind of like pointers as to what you want us to talk about, you've also allowed us to talk about anything that we may have thought relevant really. (Yvonne):*

Attrition is another methodological concern that warrants some discussion. Completion of a full set of diaries was exceptional. Forty-five per cent of women who registered an initial interest in the study subsequently chose not to participate at all and a further 17% consented to be interviewed but did not wish to, or felt unable to, complete the diary element. Further attrition at phase two was also considerable. Our analysis of field notes, transcripts and memos suggests that it was more commonly women who experienced feeding difficulties and related emotional distress during phase one who did not continue into phase two but it may have been that these reservations were compounded by elements such as perceived/anticipated discomfort when recording, lack of comfort with the method, or the additional time involved compared to interviews. With particular regard to phase two, several of the mothers had moved away from exclusive breastfeeding and may simply have felt that their experiences of feeding their infant formula or expressed breast milk from a bottle were less relevant to the aims of the study. It may also have been that a two-week break between the two data collection phases (without any contact from the research team during this period) disrupted the rhythm and momentum of participation, and commitment to the project. In addition some participants may have produced richer data if expectations of minimum length diary entry had been provided, although the ethical aspects of this especially considering that our participants were time-poor and in a novel situation would have needed very careful consideration. Unrealistic targets might have impacted negatively on the number of participants who were willing to sign onto a study of this nature.



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The nature of data produced by audio-diaries compared to interviews

In evaluating the audio-diary as a methodological tool for capturing lived experience, we were interested in the kind of data that this method produced compared to other methods. Interviews are the most commonly used method of collecting data for qualitative researchers (King and Horrocks, 2010) and our study, which used both audio-diaries and interviews, offered an opportunity to compare the data generated by each.

Whilst the accounts produced by the two methods were sometimes similar, generally the diaries offered something different to the interviews. In particular they conveyed more fluctuation and even contradiction in the women's accounts than the interviews, in which some of the complexities of varying experiences breastfeeding over the preceding week were perhaps lost. Although the women talked about change within the interviews, it was much more apparent within the diaries. Here it was possible to gain a clearer picture of the 'roller-coaster' experience of the week and the way in which participants' well-being and confidence fluctuated from day to day (or even session to session) and was closely tied to the success or otherwise of breastfeeding:

*I'm just on a bit of a high because I feel like I'm coping for the first time... but we'll see. And, yeah, the feeds have all gone well so far, that I've, oh, the one I was actually quite proud of the one I just did now at about 8 am, because I did it all on my own (Gina, diary – day 2)*

*They [her husband's parents] arrived when I was still trying to feed him and at the time I was in floods of tears because every single feed now, it seems to make me cry, because it's like so difficult, and it's also getting very painful (Gina, diary – day 4)*

Being interviewed arguably creates a pressure to produce a coherent and understandable account. At several points the interview data suggested a less "messy" picture of the previous week than that contained in the diaries. For example, Arabella (who

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moved from feeding her baby at the breast to routinely giving him expressed breast milk during the week) gave an account within the interview of how she had initially felt a failure at not finding breastfeeding enjoyable or easy but then how she had been able to resist this feeling with support from others:

*I was feeling so guilty feeling like I had failed and that I should be finding it much easier and because I wasn't, just talking to a few people, even talking to my mum, she was like, "well I struggled as well, you don't have to do it, you know, there are other ways." So, after speaking to a lot of people I finally felt a bit better, and a bit more relaxed, and then I made the decision, right, you know that's it, I'm just going to express now 'cause I'm not putting myself through it. (Arabella, interview)*

However, the diary showed more clearly how this shift in perspective had not been a straightforward process, how she had initially continued to feel a failure in spite of others' support and how she fluctuated between a sense of failure and a sense that her difficulties were not her fault. For example on day four she recorded:

*I keep saying I'm trying but I feel like I failed 'cause I just don't want to do it but he [Arabella's husband] keeps saying I haven't failed at all but it's just so hard and it's not nice at all. When all your friends are doing it as well, you feel like you're crap really 'cause they're all managing it and you aren't but I guess everybody's bodies are different and some maybe aren't meant for it. (Arabella, diary - day 4)*

From the interview data it was also possible to see that some of the women had experienced considerable distress about the difficulties they had experienced getting breastfeeding to work. For example Queenie talked about her distress at not being able to get her baby to suckle:

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*I just cried and cried and cried 'cause it was just such a big disappointment I felt like I had failed almost as a woman really, you feel like this is natural thing, why can I not do this? My baby would die if he was in a country where they didn't have bottles and all the rest of it (Queenie, interview)*

However, her diary showed how the distress and sense of failure unfolded in real time and arose out of moment by moment interactions with her baby, where she experienced trying to breastfeed him as a struggle she was losing. One day she recorded the following while feeding, alternately talking to her son and the recorder:

*"You've got to feed darling, Mummy's so worried about you." We've been trying to wake him up for the last half an hour, putting him in places he really doesn't want, lying on his own and trying to get him a bit cool, and it's really, really hard. You just don't know what you're supposed to do. "Come on little baby, there's a good boy. Upsetting your Mummy, you worry her. Please just have a little bit, Zach, come on." Teasing him on his nose, around his mouth, with my nipple, but he's just not having any of it. Oh dear. I'm sorry to be crying, it's just hard. (Queenie, diary - day 3)*

From the reflections above, it could seem as if the diaries offered more to us than the interviews. However, there were times when the interviews seemed to provide the women with an opportunity to reflect on their experiences in a way that they had not done within the diary recordings, explaining the meaning of the experiences to the interviewer. Sometimes the interviews offered additional reflections which had not been recorded previously and which were more concerned with meaning and less with events than the diaries. For example, in her diary, Gina had noted that she felt under pressure to breastfeed from her husband:

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*I'm trying not to stress myself out too much about it, because I was just feeling like my body wasn't my own, and that I was on demand all the time, my husband telling me "you need to get feeding, you need to feed the baby."*(Gina, diary – day 1)

However, in the interview she is more explicit about the meaning of this for her:

*I felt, I started to feel resentful, against people like my husband who was really wanting me to feed, and kept saying, "the baby's hungry, the baby needs feeding", and I was just in the bath or something...But it felt like he was putting the baby completely above my needs* (Gina, interview).

The idea that her husband accorded more importance to the baby's needs than to hers was not mentioned explicitly within the diary recordings.

At several points the conversation between the interviewer and the participant revealed a more nuanced and complex view on the part of the participant than had been evident in the diary, either as a reaction to a different point of view expressed by the interviewer or because the interviewer was able to probe the participant's account. For example, in her diary Uma made quite strong statements about her ease with feeding in public:

*If she's screaming and in a public place like in a pub... or a park or wherever and she needs feeding and I've got the choice between bottle and breast, I'll breastfeed her. I've got no problem - it's everybody else who's got 'em... I've got the confidence now to do that* (Uma, diary – day 3)

However, when the interviewer mentioned the embarrassment that some women feel, Uma responded in a way which suggested a more complex perspective on the issue:

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*Don't get me wrong, I will probably sit there with a red face..., because yeah, you are getting your boob out in public, you know, but whose problem is it really? (Uma, interview)*

To conclude this section, the diaries often offered a fuller picture of the day-to-day changes and fluctuations in experience which were sometimes summarised and somewhat glossed over within the interviews. They provided a more vivid picture of the degree of distress that some of the women experienced. However, it was useful to follow the diaries with interviews as this enabled us to probe, interrogate and clarify some of what had been recorded and ask the women to reflect further on the meaning of their experiences for them.

### *Epistemological Issues*

It is possible to use audio-diaries to collect data for analysis from a range of epistemological, ontological and theoretical positions. This could include realist analyses of the unfolding of events and related processes, consistent with the aims of a traditional grounded theory approach (Glaser, 1998), phenomenological analyses of meaning-making in the moment (Giorgi and Giorgi, 2008) and analyses of the way in which day-to-day accounting is constructed from dominant cultural discourses (Willig, 1999). Thus far, we have analysed the data from a feminist poststructuralist perspective within a critical realist framework (e.g. Johnson *et al.*, 2009) and have more recently employed a social-constructionist version of interpretative phenomenological analysis (e.g. Williamson *et al.*, 2012) and a thematic analysis informed by symbolic interactionism (e.g. Leeming *et al.*, 2013). In some of these articles we have examined the data of a smaller, more homogeneous sub-group of participants, for example those who experienced particular challenges with initial feeding (Williamson *et al.* 2012) to maintain analytical depth and the 'idiographic sensibility' of an interpretative phenomenological approach. Elsewhere we have explored processes that appeared to be common for most or all the participants and illustrate the contemporary socio-cultural landscape in which breastfeeding is practiced (Leeming *et*

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*al.*, 2013). Across both approaches we have taken an ontological position of critical realism to knowledge-production (Elder-Vass, 2012) and thus regard the diaries as providing an insight into the women's lived experience whilst recognizing that these accounts and the experiences themselves are inevitably shaped both by intrapersonal and contextual factors. We argue that 'truths' about breastfeeding experiences are multiple and contingent and hermeneutic processes are affected by what participants are willing and able to articulate (Spencer, 2008). Although the presence of the researcher may not be such a visible factor in determining what can be said in a diary, there may still be concerns about exposure and issues of stake and accountability remain relevant, especially as mothering and breastfeeding are highly scrutinised activities in contemporary Western societies (Marshall *et al.*, 2007). As illustrated in the previous section, this may mean that subtly or considerably different versions of events and experiences are expressed at different times or in different methods in a mixed-methods design, and we have therefore been cautious of using the concept of triangulation in our interpretations of the data. Brocki and Wearden (2006, p.94) observe that (audio) diaries appear to be an 'excellent alternative' to the more commonly used interviews for yielding comprehensive narratives for phenomenological and related forms of analysis, especially where participants can be encouraged to make regular and detailed entries. It is also notable that when offered an open-ended method of recounting their experiences, some participants expressed their difficulty in capturing all aspects of their experiences, an issue which needs consideration as part of any analysis.

### **Conclusions and Recommendations**

Bolger *et al.* (2003, p. 610) have argued that diary-based studies offer '*a unique window on human phenomenology*' and are well placed to capture '*the particulars of everyday life*'. We found the audio-diary method specifically to have several merits especially in combination with follow-up interviews and a significant sub-set of participants accrued tangible benefits from keeping diaries in this manner. The audio-diary method facilitated

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participants in providing spontaneous, moment-by-moment accounts of experience which reflected their priorities and usually yielded rich experiential data for interpretation. However, several caveats need to be taken into account. Compared to other methods for collecting qualitative data, audio-diaries may raise additional ethical issues relating to confidentiality, the demands of participation and reactance. Used as a stand-alone method diaries also do not enable the researcher to probe participant accounts and as such some data may be thin or may not focus sufficiently on the research question. Attrition may also be higher than for methods which require less commitment from participants. In our study educated and married participants from middle-class backgrounds were overrepresented although this may be more reflective of patterns of breastfeeding in the United Kingdom than feelings about the research methods utilised in the study. None-the-less it is important to retain a degree of caution in assuming that participants from other demographic groups would respond similarly to completing audio-diaries.

Two final practical issues to consider are the selection of equipment and the amount and costs of transcription. We would advise other researchers who are considering using audio-diaries that the selection of equipment for recording and guidance requires considerable attention. Participants may find unfamiliar or complex looking devices off-putting. Our research assistant trained participants in the use of the equipment on first visit and we provided all participants with a simple set of guidance notes (presented as a colourful, double-sided, laminated document with the diary prompts on the reverse face). However, a small number of participants found the use of mains adaptors limited their mobility and flexibility in recording entries. Despite the quality of the sound-recordings produced, mini-disk recorders are not widely available and are relatively expensive. Future researchers may wish to consider using Smartphone devices with Dictaphone functionality. These are lightweight and highly portable, easily (re)charged and familiar to most participants (Moylan *et al.*,2013). Their employment could also facilitate communication with the research team (thus addressing concerns around participant support and engagement). One disadvantage of

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using audio-diaries, rather than written or especially word-processed/on-line diaries, is that a considerable amount of transcription is required which requires significant resources. As illustrated above we wanted diary entries to inform questioning in the interview phase. Because of the timings of our protocol it was not always possible to have diaries transcribed in full ahead of the interview and therefore members of the research team had to make notes from the recordings instead. The costings and timings of transcription require careful consideration when planning and budgeting the proposed research and because of the highly heterogeneous amounts of data produced by different participants this aspect can be more difficult to predict than in interview-based studies.

To conclude, audio-diaries appear to be an under-utilised option within the qualitative researcher's toolbox. It appears that they can yield valuable data, either as a standalone method or when supported by other methods. Whilst audio-diaries raise unique ethical concerns and researchers need to remain aware of the changing nature of new technologies and participants' related training needs, the method appears to have the potential to include and engage a range of participants in a potentially data-rich method which is not generally perceived as overly burdensome and which may yield benefits for the participants themselves.



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