A creative approach to analysing and representing narrative data incorporating photo-elicitation techniques

Introduction

This paper discusses the use of an innovative and robust analytical framework that was developed as part of a PhD study; exploring mothers' and midwives' experiences of babies removed at birth. The study discussed in this paper uses an original combination of oral narrative and photo-elicitation, to listen and learn from those with experience. The introduction of photographs into narrative interviews and focus groups is innovative in design, which contributes to greater insight into human experience than that from oral data alone (Marsh et al: 2016). Creating an innovative research design can present many challenges in relation to finding an appropriate and robust analytical framework that supports the aspiration, to present the participants' stories and photographs, in a meaningful way. This paper presents and explains the development and application of a six-step approach to data analysis entitled LEARNS (**L**isten, **E**xtract, **A**rrange, **R**efine, **N**ame, **S**tructure), offering health science researchers a framework to analyse and represent a combination of oral data and photo-elicitation techniques.

Background – Narrative and the narrative turn

Narrative inquiry was selected for this research study to explore mothers' and midwives' stories of their experiences of babies being removed at birth. The use of stories in research has become increasingly popular in the human sciences (Riessman,1993) and provides researchers with a "rich framework through which they can investigate the ways human beings experience the world through stories" (Holloway and Wheeler, 1996). Narrative inquiry is an effective method for the gathering of individual thought, feeling and experience, which are sensitive to the issues that may not be revealed by more traditional methods (Webster and Mertova, 2007).

Narrative inquiry is grounded in interpretative hermeneutics and phenomenology and is based on the belief that we are able to understand and give meaning to our lives, as human beings, through our stories (Andrews, Squire and Tambouko, 2008). This

type of qualitative research realises this by collecting stories that are written, spoken or visualised; focusing upon the meanings that individuals attribute to their experience. The purpose and value of narrative research is to facilitate the meeting of an individual's story with the reader, thereby creating an opportunity for the reader to engage with and experience the individual's story and reactions from their perspective, at that moment in time (Webster and Mertova, 2007).

Analysis of narratives

Diversity exists in how storied data gathered in narrative inquiry is analysed and represented (Riessman, 1993), more so when there is a need to combine this with another, more creative data collection method. Analysis of narratives has been influenced by various scholars over the years and across a wide range of disciplines (Riessman, 1993; Polkinghorne, 1995; Embden, 1998; Priest, Roberts and Woods, 2002; Beal, 2013). Despite this, no singular theoretical approach or standard framework exists.

In response to this, researchers are developing data analysis methods that are sensitive to the contextual aspects of their study. McLeod and Balamoutsou (2001) support this and whilst asserting the need to be transparent in identifying and justifying the process used, advocate for analysis methods that align with the study context and design.

This was particularly pertinent for this study as the data collection crossed two different population groups, incorporated three separate data collection streams and did not seem to fit existing narrative analytical frameworks (see **Table. 1**).

Table 1- Data collection streams

Population Group	Focus Groups	Face to Face Interviews	Photo-elicitation Interviews	Photo-elicitation Focus groups
Mothers		X	X	
Midwives	X			X

Data collection

The transcibing of audio recordings from six focus groups involving eight midwives, eight face to face interviews with four mothers, observational field notes and 40 photographs were analysed. One to one interviews were selected for the mothers and focus groups were selected for the midwives; both incorporating photo-elicitation techniques as described by (Marsh *et al*; 2016).

The researcher met the mothers and midwives on three occasions. The first meeting was used to collect demographical information, explain the research process, gain consent and begin developing rapport with the participants. During the second meeting the first interview/focus group was undertaken and participants were invited to share their individual stories. After the second interview, all participants were invited to take photographs of what they felt, most likely represented their thoughts and feelings of the experience they shared. At the third interview participants were asked to share the images they had taken.

As they shared their pictures, the participants also shared oral narratives. This linked other elements of their story together and collectively offered insight into their experience and personal meaning making. The interpretations and stories behind the images shared by participants formed the narrative for analysis. The images were then used to represent the stories in a meaningful way.

 Developing a coherent analytical process

Various approaches to analysis were explored. Explanatory analysis of the data aims to understand why or how something happened and what the motivation of the individuals in the story were. This methodology then looks to make connections between the perceptions, actions and motivations of individuals, in order to arrive at a narrative explanation for a particular outcome (Polkinghorne, 1995). For example, how something happened or what actions in peoples' lives led them to where they are today. This approach could have lent itself to this study, however, it did not answer the research questions entirely, which was not to understand why babies were removed but to develop an understanding of what the experience was like for mothers at that time. Furthermore, to explore and identify what midwives need to know in order to provide the best care for this group of women. In comparison, a

descriptive analysis produces a narrative account of the significant elements and common themes of the individual experiences and is particularly suited to research topics where there is little known about the phenomenon (Polkinghorne, 1995).

The experiences of mothers and midwives in relation to babies removed at birth, is under researched. The literature does show that mothers whose babies are removed at birth are often experiencing mental health issues, substance misuse issues and/or living chaotic lifestyles (Everitt, 2013). Following removal of their baby , evidence indicates that they are at greater risk of prolonged grief symptoms, leading to further mental health issues and social exclusion (Lewis, 1995; Klee, 1998; Chapman, 2003).

For midwives, the challenge of providing emotional support to this group of women at this time, is described as one of the most challenging aspects of midwifery practice. Midwives also recognise the juxtaposition and paradox of seeking to meet the needs of the mother/midwife relationship whilst upholding their responsibility to safeguard the baby. They also recognise the need for further education and training in this area.

Undertaking the analysis

With little evidence and a dearth of knowledge in this area, it was deemed important to report on the entire dataset, including both the individual perspective as well as the dominant themes. Polkinghorne (1995), suggests that undertaking analysis in this way provides an accurate reflection of the whole dataset and not just the key themes.

Holistic content analysis, adapted from Polkinghorne (1995), by Beal (2013), is similar to that of narrative content analysis. However, instead of breaking down the data into codes, she suggests being more "playful" with the size of the data elements used, in order to keep the stories as a coherent whole. Being playful with this concept led to the creation of a six step framework entitled LEARNS (see **Table. 2**) that enables key phrases, words or whole paragraphs to illuminate the individuals story in association to the context in which events and happenings take place.

Learning to learn: Creation of the LEARNS approach to analysis in narrative inquiry

This step by step process was developed in order to find the best fit for the research study discussed in this paper and a strategy of making the analytical process transparent. The development of steps further enabled the consideration of different experiences and narrative formats, that could organise the data in such a way, to enable greater understanding and insight, into the experience. As the steps emerged and were further developed, so their relationship and interrelationship with the study as a whole took shape. Informed by the work of Polkinghorne, (1995); Embden, (1998); Riessman, (1998); Beal, (2013) and via reflective discussion with the supervision team, the steps were listed in sequence and the acronym LEARNS developed.

L - Listen

E – Extract

A – Arrange

R – Refine

N – Name

S – Structure

Step one – Listening to the stories
The oral narratives from the focus groups and face to face interviews were transcribed verbatim into "textualized" form, as only in "textualized form will the data yield results" (Van Maanen, 1988, p.95). I then undertook a first read of the transcripts alongside listening to the corresponding audio recording, in order to reconnect with the story teller. This was enhanced by then re-reading the transcripts several times in order to immerse and engage with the data and make notes of initial thoughts, ideas and comments as I read the text.

Step two – Extract the core story
Step two involved the removal of all interviewers' questions, comments and elements that detracted the story from the storyteller and re-reading to make sure it was still understandable. This process was repeated several times to ensure that the text

made sense and that coherence of the story was not lost. This step of the analysis framework was informed by a process described by Embden (1998) as core story creation. To achieve this, full length stories were reduced to shorter ones, to see the plots and subplots across individuals' stories within the whole collection when placed alongside others. Different colour paper was used for each participant in a simple but effective organisation approach.

Step three – Arranging the stories across the plotline

The use of coloured paper enabled the researcher to retain the individual identities of the storytellers. One aim of holistic-content analysis is to search for plots and sub-plots across examples of stories. Polkinghorne (1995), describes this as emplotment. Emplotment involves working backwards, forwards and across the plots and sub-plots of individuals' stories in a manner that highlights the significant elements (Polkinghorne, 1995; Embden, 1998). In essence, emplotment ascribes sense to a story (Embden, 1998) in such a way that the significance of the story is disclosed. This process can also be used in research to give accounts of why an event may have happened.

The purpose of the research was to use the data to describe the meaning and significance these stories hold for the individuals who shared them. This was done by first of all constructing a plotline on a large piece of paper, starting with the antenatal period and ending in the postnatal period. Polkinghorne (1995) suggests that all stories should have a bounded temporal period with a clear beginning, middle and end. The boundaries of the plotline for the stories in this study were set to ensure actions and events spanned the four dimensions of the set story parameters. This included the period of time when a mother may have been in contact with a midwife, i.e. antenatal period, intra-partum period, removal of baby and the postnatal period.

These four dimensions aligned with the interview and focus group structures that had posed questions to elicit data around these time markers, in order to find out what mothers' experiences were of the maternity care given to them; not only at the time of the baby's removal, but across the whole childbirth continuum. A few participants kept within these time parameters and shared their story in a chronological order, but the majority moved back and forward from retrospective historical parts of their lives,

as early as their own childhoods and into the present of what life was like for them now.

Whilst some areas covered within individual stories were not pertinent to the storyline parameters of this research, they offered historical context to the participants stories, which Polkinghorne (1995) suggests is essential in the emplotment process. Polkinghorne (1995) does not describe a clear procedure as to how to undertake the emplotment process and asks that researchers find their own course of action during this phase. Therefore, after careful consideration as to the best approach for this research, core stories were cut up and placed in temporal order one by one onto the lengths of paper in relation to one of the four dimensions.

Step four – Refining the themes
Once all of the core stories had been placed upon the sheets, events and happenings that were significant to the story tellers began to emerge (Polkinghorne, 1995). These were further defined by working systematically across the dataset comparing and contrasting both mothers' and midwives' stories. Equal attention was paid to each story within each of the four dimensions using highlighters, post it notes and colour coding, to identify and categorise the emergent themes of significance. Further defining and refining of these themes continued until it was agreed by the supervision team that they demonstrated an accurate representation of the data set.

Step five – Naming the themes
This part of the analysis ensured that the name chosen for each main theme and sub theme was clear, succinct and epitomized the very essence of what it represented. This step also required a detailed analysis of each theme presented including the use of direct quotes from the core stories to provide evidence of why it was of importance and therefore worthy of inclusion. At this stage, input from the supervision team was essential, to ensure that the findings linked back to the holistic ambition of the analysis process. Sharing the findings in a congruent and meaningful way, which may have potential use in the future education and training of student midwives/midwives, was also an important consideration. The themes were separated into two overarching themes, **mothers' and midwives' stories**, each with main themes and identified subthemes (see **Table. 3** and **Table. 4**)

<u>Step six – S</u><u>tructuring the composite narrative</u>

Step 6 of the process involved the braiding and retelling of all the stories shared by the mothers and midwives, into two coherent and meaningful composite narratives, that would engage the reader. The contextual stories reflect the mothers' or midwives' perspectives and experiences of babies removed at birth. In order to be congruent to the analytical approach chosen, the data elements were linked together theme by theme to create a composite narrative.

As an example: the first theme presented in the mothers story was entitled "Then I fell pregnant" and signals the beginning of the mothers story across the childbirth continuum. All mothers talked about the point when they became pregnant, the composite narrative captures all of their view points and braids them together and shares how the mothers expressed similar feelings i.e. shock, surprise, denial, alongside knowing that social workers would be involved. The paragraph of the composite narrative explaining this contains all of the mothers' words/voices taken from the transcribed interviews to describe this moment. To illustrate this process, the mothers are anonymised, highlighted in bold in this extract to show their presence in the composite narrative. Key to the mother's voices: Lilly, Eve, Amber and Rose.

*I went to the doctors thinking there was something seriously wrong (**Eve**) and he said to me "well could you be pregnant?" And I was like," well no 'cause I'm on the pill". He said "well what're you using for the pill?" and I told him I had an implant in and he said "well, you shouldn't be but we will test you for that first" and it came back positive. And it was like "OK" .....so that was a big shock to deal with………..I was 12 weeks pregnant when I found out, it was a total shock (**Lilly**) and although I knew that we would have to have a social worker involved and have to have assessments done, because of what happened before (**Eve**), I wanted to avoid having to tell anyone but I knew I needed to see a midwife, so I had no choice. In fact, looking back, I feel that I was avoiding the fact that I was pregnant at all (**Ambe**r). I think it was just my subconscious way of dealing with it – you know? just in case………….. I should have been happy but I instead I was in a state, all of the time (**Rose**).*

This braiding process continued through the themes, across the plotline of the entire childbirth continuum and when linked together describes the mothers' and midwives' stories of babies removed at birth.

Implications for practice

The LEARNS step by step framework presented in this paper, was developed in order to best fit the data collected in this research. The framework also offered the best possible opportunity to develop greater insight and understanding into the experiences of mothers whose babies are removed at birth. Whilst it was developed initially, as a framework to analyse the combination of both oral and creative data, it could be used for oral data alone and across a wide range of health and social care research. The composite narratives created as a result of this framework have also been used to create digital stories for the education of pre-registration midwives and allied health professionals. It also has the potential to be used for the education of health service staff involved in the removal of babies at birth.

Conclusion

The data collected in this study has contributed to new knowledge in this area and provides valuable insight into a topic that has previously received minimal attention from a research perspective. In addition to this, the analysis framework LEARNS, developed as part of the analysis process, offers a reliable, transparent and credible way of analysing data generated from the combination of narrative inquiry and photo-elicitation techniques. This innovative framework could offer other researchers a reliable framework to use for future research in social science research and guide and empower novice researchers to seek to develop their own analytical frameworks to "best fit approach" to their own studies.

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