CHAPTER 8:

INTRODUCTION TO QUALITATIVE DATA ANALYSIS

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CHAPTER OVERVIEW

Qualitative data includes a range of textual (e.g. transcripts of interviews and focus groups) and visual (photographic and video) data. During qualitative analysis researchers make sense of this data gathered from research. Analysing the data by looking for common themes (known as thematic analysis) is one of the most common ways in which to do this and involves examining and recording patterns within the data relating to a specific research question. There are various criticisms levelled at qualitative analysis including issues relating to validity, reliability and credibility. Researchers can address these through a range of methods including triangulation of data, member validation, careful sampling and transparency of approach. The themes resulting from this form of analysis can illuminate participants' meanings, actions and social contexts relating to the phenomena under consideration.

LEARNING OBJECTIVES

By the end of this chapter you should be able to:

1. Understand what qualitative data is and how it can be analysed
2. Understand the factors that influence the choice of appropriate qualitative analysis methods
3. Understand how to carry out thematic qualitative analysis on qualitative research data

INTRODUCTION

The purpose of qualitative data analysis is to make sense of textual (e.g. transcripts from interviews and focus groups) and visual data (photographic and video) gathered through qualitative methods by identifying patterns and drawing inferences from them.

Qualitative data analysis can be:

- Inductive – analysis is guided only by the data collected during the study (e.g. akin to grounded theory)
- Deductive – analysis is guided by existing theories and frameworks (e.g. certain types of framework analysis)
- A combination of deductive and inductive approaches

Inductive approaches are most commonly used within qualitative data analysis with knowledge built from the ground up. Data analysis is usually carried out concurrently with data collection in line with the constant comparison method (Charmaz, 1995) so that any issues that emerge from the data can be explored in an iterative manner during future data collection and analyses (Figure 24).

Figure 24 Constant comparison method of qualitative data analysis

Thematic analysis

Thematic analysis is a core method for qualitative research and a flexible research tool which provides a rich and detailed account of data collected (Braun and Clarke, 2006). In a thematic analysis, researchers firstly read and re-read transcripts to ensure they are familiar with the data. Data is then searched to identify any recurrent patterns, which are then coded as such by the researchers (Figure 25). During the process of coding utilising a constant comparative method, researchers should actively consider the following questions:

- What is happening here?
- Under what circumstances does this happen?
- What is this data relating to?
- Are there any pre-existing codes this relates to? (Glaser, 1978)

Figure 25 Types of qualitative coding

Open coding – codes can be definitions, perspectives, processes or events

- What does 'involvement' mean?
- Who is care planning for?
- Care planning meetings
- Barriers to involvement

Axial coding – the relationship between codes

- Pre-requisite code
- Outcome code
- How one code impacts on another

Selective coding – having established a code, looking for more examples to explore in more depth

Researchers then develop overarching themes from the codes. A theme is a cluster of linked categories conveying similar meanings, which emerge through the inductive analytical process, characterising the qualitative paradigm. Researchers should break off frequently from the process of analysis to write memos detailing their thoughts on particular themes and to reflect on any issues arising during the analytical process. Final themes are presented with supporting quotations from the raw data, and often brief detail on the demographic characteristics of the participant is also provided for contextual reference (Figure 26).

Figure 26 Examples of themes from an EQUIP paper exploring the role of carers within the care planning process

The structure and purpose of optimal care planning

What good care planning would be like? For us all to sit down and to build a picture of what my son would like to be doing in six months' time and how he would like to get there. And for us all to have a written copy of how that's going to happen and somebody to follow it through every stage of the way.

Carer 1001, female, 53, cares for a son with a diagnosis of schizophrenia

Relational barriers to involvement in care planning

And I think there's an awful lot of... us and them, and a bit kind of pat you on the head, you're not expected to know what all this jargon means. Carer 1013, male, 27, cares for a brother with a diagnosis of bipolar disorder

Confidentiality as a barrier to involving carers in mental health care planning

So it was like huge barricades up around this trivial information, trivial stuff. So... that in itself as you can imagine, was intensely upsetting and, and infuriating. But it's more that it symbolises this idea that as the carers you're nobody. Carer 1015 male, 45, cares for wife with a diagnosis of borderline personality

The analysis process should be undertaken by multiple researchers who code data independently. Researchers should meet regularly to discuss emergent analysis and to develop an agreement upon a set of codes. During these discussions specific consideration should be given to:

- alternative explanations of interpretations
- duplication of codes
- relationships between codes
- disagreement between researchers
- avenues for further exploration

These on-going discussions ensure that codes and resultant themes remain grounded in the data for purposes of validity. The constant comparison of new data means that the thematic framework can be amended and developed over time to allow for new codes to be introduced or redundant codes to be removed.

Thematic analysis exercise

Consider the content of the interview you conducted for the exercise in Chapter 7.

- What were the key themes to emerge from the interview?
 - What open codes are these based on?
 - How do these codes relate to each other?
- Did you identify any codes/themes that merit further exploration in any future interviews?

Ask a willing friend/colleague to independently identify the main themes emerging from the interview. Consider:

- how your emergent themes are similar and how do they differ?
- how you now feel about your original analysis?
- identifying three themes that you both agree on.

Triangulation of data

In addition to transcripts from interviews, qualitative data can also include observational data, diaries, photographs, digital forum discussions, social media posts and video recordings. For example, when interviewing participants about their experience of living with a chronic condition, you may want to ask them to capture their experience using photographs. These can be treated as a unit of data and analysed thematically in addition to the transcripts from interviews, and presented to support interpretations. (Figure 27)

Figure 27 Example of photographic data presenting diabetes recording equipment

By combining different types of data, you can add strength to your analyses and address some of the criticisms directed at one particular type of method. For example, in the case of interviews and focus groups it has been asserted that people may give socially acceptable accounts (public accounts) in formal research interviews that do not reflect their actual views and experiences (private accounts). By adding observations to the methodological approach, these concerns can be reduced.

Adding depth of understanding to randomised control trials (RCT)

Qualitative analysis can be useful when trying to understand why participants do, or do not, engage with interventions being tested as part of a randomised control trial (RCT). During EQUIP, this was explored using a longitudinal, qualitative process evaluation which ran alongside the RCT designed to test the training intervention. This involved:

- Semi-structured interviews – service users, carers and professionals sampled from both the intervention and control arm of the trial took part in three semi-structured interviews over the course of one year
- Observation of how service users and professionals adopt and use the new user/carer involved care planning
- Diary records of user and carer experiences of care planning

Analysis of this data identified a range of barriers to the use of the new user/carer involved care planning approach within mental health services which would not have been identified through the RCT alone. Examples included:

- Professionals cited time as a major barrier to involving service users and carers in care planning. A lack of resources within services meant caseloads were increasing and staff had limited time to spend with service users.
 - *"There's that pressure. People aren't being replaced. Erm...you know, people just expected to absorb more cases."*
- Service users acknowledged this lack of resources and described feeling under pressure to be discharged from services and minimal contact with their care team. Care co-ordinators were replaced frequently, meaning there was little time to build up relationships they considered as prerequisites to suitable involvement in the care planning process.

Trustworthiness of data and analysis

As with other types of data analysis, there are no strategies that guarantee trustworthiness of data, and the choice of how best to deal with issues of validity and reliability are normally at the discretion of the individual researcher. There are a number of issues to bear in mind when designing and undertaking qualitative analysis.

Validity

The validity of qualitative data refers to the 'trustworthiness' of the data or its ability to reflect the reality it is seeking to explore. Scientific validity is traditionally tested through replication. However, this is not possible with qualitative research due to the specific, context-dependent nature of the study design. Instead, careful attention is given to the context (both individual and societal) in which interviews are based and to the researchers carrying out the study. For example, the team should reflect on and make explicit any assumptions or bias they may bring to interviews. This can include theoretical positioning or any past experience that may have relevance. Here is an example of a reflexive statement about researcher positioning (Brooks et al., 2016):

HB and KR are health service researchers, SW is a Lecturer in Mental Health, KL is a Professor in Mental Health and AR is a Professor of Health Systems Implementation. As such, researchers had no therapeutic relationship with participants. The conceptual starting point of our study is one informed by a capabilities approach which recognises that social context and engagement with valued people, places and activities are often hidden from view but are likely to be as important to the management of long-term conditions as traditional therapeutic or self-management support approaches.

Researchers may also consider triangulation of data (discussed previously) and/or member validation. Member validation is commonly used to validate qualitative research findings. At its most basic level, it involves showing interviewees details of the analysis or summaries in order for them to confirm interpretations. During EQUIP, service users and carers were included as part of the analytical team and often led the analytical process to ensure that the data and any subsequent analysis reflected the reality of mental health care planning (Cree et al., 2015; Grundy et al., 2016). The production of a 'paper trail' (field notes and versions of coding frameworks) should also enhance the trustworthiness of qualitative data analysis.

Reliability and generalizability

Reliability refers to the ability of data to be consistent across time and contextual variations. In the natural sciences, this is argued with the defence of statistical significance and power calculations. In qualitative research, arguments are instead made for commonality or typicality (Fossey et al., 2002). Within the studies included in EQUIP, commonality was inferred by the fact participants were recruited by virtue of having certain characteristics (e.g. service users under the care of a community mental health team).

Credibility

Given the interpretative nature of qualitative analysis, credibility refers to the interpretations made about the data (Green and Thorogood, 2005). In order to address credibility, emerging themes should be discussed and tested with the wider research team to ensure concepts and themes derived from the data are rooted in the raw data itself.

PPI stories from EQUIP

Next, Lindsey is going to describe her experiences of undertaking qualitative data analysis as part of the EQUIP project.

LINDSEY'S STORY

During EQUIP I worked with experienced colleagues to analyse a lot of qualitative data. Gathering and analysing the data and putting them into themes was really exciting, but also daunting. I suddenly realised the number of issues that had been raised during our interviews and focus groups, that they were real issues for people and that we needed to look

at them in depth. I remember feeling really inspired when the need to train professionals was identified as a recurrent topic. I was also heartened that issues of confidentiality, which had raised a lot of concern with carers, were going to be taken seriously by our research team.

I was the lead author on a paper which set out to document the experiences of carers in mental health services, which was published in BMC Psychiatry. I still pinch myself occasionally. In my world, research papers have always been written by professionals. My work on EQUIP has made a difference but I couldn't have done it on my own. The research team have been supportive and never once made me feel inept. Considering I left school with no qualifications, our achievements have been amazing.

REFLECTIVE EXERCISE

- Describe the two main approaches to qualitative analysis.
- Describe and outline the main stages of thematic analysis.
- What are the main criticisms of qualitative data analysis and what strategies can researchers employ to overcome them?

ALLIED EQUIP PAPERS

Bee, P., Brooks, H.L., Fraser, C. and Lovell, K. (2015) Professional perspectives on service user and carer involvement in mental health care planning: A qualitative study. *International Journal of Nursing Studies*, 52:12, 1834-1845.

Brooks, H. L., Rushton, K., Walker S. and Rogers, A. (2016) Ontological security and connectivity provided by pets: A study in the self-management of the everyday lives of people diagnosed with a long-term mental health condition. *BMC Psychiatry*, 16, 409.
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Strauss, A. and Corbin, J. (1990) *Basics of qualitative research: Grounded theory procedures and techniques*. Newbury Park: Sage.