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First steps in qualitative data analysis: transcribing

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Qualitative research in primary care deepens understanding of phenomena such as health, illness and health care encounters. Many qualitative studies collect audio or video data (e.g. recordings of interviews, focus groups or talk in consultation), and these are usually transcribed into written form for closer study. Transcribing appears to be a straightforward technical task, but in fact involves judgements about what level of detail to choose (e.g. omitting non-verbal dimensions of interaction), data interpretation (e.g. distinguishing 'I don't, no' from 'I don't know') and data representation (e.g. representing the verbalization 'hwarryuhh' as 'How are you?').

Representation of audible and visual data into written form is an interpretive process which is therefore the first step in analysing data. Different levels of detail and different representations of data will be required for projects with differing aims and methodological approaches. This article is a guide to practical and theoretical considerations for researchers new to qualitative data analysis. Data examples are given to illustrate decisions to be made when transcribing or assigning the task to others.

Keywords. Audio recording, data transcription, data analysis, qualitative research, video recording.

Introduction

Qualitative research can explore the complexity and meaning of social phenomena,^{1,2} for example patients' experiences of illness³ and the meanings of apparently irrational behaviour such as unsafe sex.⁴ Data for qualitative study may comprise written texts (e.g. documents or field notes) and/or audible and visual data (e.g. recordings of interviews, focus groups or consultations). Recordings are transcribed into written form so that they can be studied in detail, linked with analytic notes and/or coded.⁵

Word limits in medical journals mean that little detail is usually given about how transcribing is actually done. Authors' descriptions in papers convey the impression that transcribing is a straightforward technical task, summed up using terms such as 'verbatim transcription'.⁶ However, representing audible talk as written words requires reduction, interpretation and representation to make the written text readable and meaningful.^{7,8} This article unpicks some of the theoretical and practical decisions involved in transcribing, for researchers new to qualitative data analysis.

What are the aims of the research project?

Researchers' methodological assumptions and disciplinary backgrounds influence what are considered relevant data and how data should be analysed. To take an example, talk between hospital consultants and medical students could be studied in many different ways: the transcript of a teaching session could be analysed thematically, coding the content (topics) of talk. Analysis could also look at the way that developing an identity as a doctor involves learning to use language in particular ways, for example, using medical terminology in genres such as the 'case history'.⁹ The same data could be analysed to explore the construction of 'truth' in medicine: for example, a doctor saying 'the patient's blood pressure is 120/80' frames this statement as an objective, quantifiable, scientific truth. In contrast, formulating a patient's medical history with statements such as 'she reports a pain in the left leg' or 'she denies alcohol use' frames the patient's account as less trustworthy than the doctor's observations.¹⁰ The aims of a project and methodological assumptions have implications for the form and

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content of transcripts since different features of data will be of analytic interest.⁷

What level of detail is required?

Making recordings involves reducing the original data, for example, selecting particular periods of time and/or particular camera angles. Selecting which data have significance reflects underlying assumptions about what count as data for a particular project, for example, whether social talk at the beginning and end of an interview is to be included or the content of a telephone call which interrupts a consultation.

Visual data

Verbal and non-verbal interaction together shape communicative meaning.¹¹ The aims of the project should dictate whether visual information is necessary for data interpretation, for example, room layout, body orientation, facial expression, gesture and the use of equipment in consultation.¹² However, visual data are more difficult to process since they take a huge length of time to transcribe, and there are fewer conventions for how to represent visual elements on a transcript.⁵

Capturing how things are said

The meanings of utterances are profoundly shaped by the way in which something is said in addition to what is said.^{13,14} Transcriptions need to be very detailed to capture features of talk such as emphasis, speed, tone of voice, timing and pauses but these elements can be crucial for interpreting data.⁷

Example 1

The following example shows how the addition of pauses, laughter and body conduct to a transcript invites a different interpretation of an exchange between doctor and patient. The excerpt below is taken from near the end of a consultation, after the doctor has made the diagnosis of a viral infection which does not warrant antibiotics. Transcribing the verbal content alone, it appears that the patient is happily accepting the doctor's advice:

Dr 9: I would suggest yes paracetamol is a good symptomatic treatment, and you'll be fine

Pt K: fine, okay, well, thank you very much.

Representing (some) non-verbal features of the interaction on the transcript changes the interpretation of this two-line interaction (see Appendix, transcription conventions):

Dr 9: (..) I would suggest (..) yes paracetamol or ibuprofen is a good (..) symptomatic treatment (..) um (.) (slapping hands on thighs) and you'll be fine

Pt K: fine (..) okay (.) well (..) (shrugging shoulders and laughing) thank you very much

In the second representation of this interaction, both speakers pause frequently. The doctor slaps his thigh and uses the idiom 'you'll be fine' to wrap up his advice giving. In response, Patient K is hesitant and he uses the mitigation 'well', shrugs his shoulders and laughs, suggesting turbulence or difficulty in interaction.¹⁵ Although the patient's words seem to indicate agreement, the way these words are said seem to indicate the opposite.¹⁶

Example 2

In another example, the addition of non-verbal features again gives a deeper understanding of the doctor-patient interaction. This patient has consulted on a Saturday morning with sore throat symptoms. In the extract below, the doctor seeks clarification about Patient F's symptoms:

Dr 5: So let's just go back to this. So, so you've had this for a few weeks

Pt F: yes

Adding in non-verbal features conveys that this is a potentially problematic exchange:

Dr 5: .hhh so let's just go back to this (.) so (..) so you've had this for a few weeks

Pt F: yes (1.0) (left hand on throat, stroking with fingers)

The doctor starts with a prominent in-breath and stresses the word 'weeks' in her recapping of the duration of symptoms. Patient F responds, but there is then a prominent pause during which he strokes his throat with his fingers (the site of his sore throat). The 1-second pause is 'accountable', in other words something is expected in this space.¹⁷ Patient F does not expand on his answer, but his gesture visibly demonstrates his symptoms. The duration of the symptoms (a few weeks) appears therefore to be accountable, in other words to need explaining. The doctor addresses this accountability directly in her next turn:

Dr 5: I must ask you (.) why have you come in today because it is a Saturday morning (1.0) it's for urgent cases only that really have just started

Pt F: Yes because it has been troubling me since last last night (left hand still on neck)

This more detailed level of transcribing facilitates analysis of the social relationship between doctor and patient; in this example, the consequences for the doctor-patient interaction of consulting in an urgent surgery with 'minor' symptoms.¹⁶

Data must inevitably be reduced in the process of transcribing, since interaction is hugely complex. Decisions therefore need to be made about which features

of interaction to transcribe: the level of detail necessary depends upon the aims of a research project, and there is a balance to be struck between readability and accuracy of a transcript.¹⁸

Who should do the transcribing?

Transcribing is often delegated to a junior researcher or medical secretary for example, but this can be a mistake if the transcriber is inadequately trained or briefed. Transcription involves close observation of data through repeated careful listening (and/or watching), and this is an important first step in data analysis. This familiarity with data and attention to what is actually there rather than what is expected can facilitate realizations or ideas which emerge during analysis.¹ Transcribing takes a long time (at least 3 hours per hour of talk and up to 10 hours per hour with a fine level of detail including visual detail)⁵ and this should be allowed for in project time plans, budgeting for researchers' time if they will be doing the transcribing.

What contextual detail is necessary to interpret data?

Recordings may be difficult to understand because of the recording quality (e.g. quiet volume, overlaps in speech, interfering noise) and differing accents or styles of speech. Utterances are interpretable through knowledge of their local context (i.e. in relation to what has gone before and what follows),⁸ for example, allowing differentiation between 'I don't, no' and 'I don't know'. Interaction is also understood in wider context such as understanding questions and responses to be part of an 'interview' or 'consultation' genre with particular expectations for speaker roles and the form and content of talk.¹⁹ For example, the question 'how are you?' from a patient in consultation would be interpreted as a social greeting, while the same question from a doctor would be taken as an invitation to recount medical problems.¹⁴ Contextual information about the research helps the transcriber to interpret recordings (if they are not the person who collected the data), for example, details about the project aims, the setting and participants and interview topic guides if relevant.

How should data be represented?

Written language is represented in particular standardized ways which are quite different from audible speech. For example, 'hwaryuhh' is much more easily read and understood if represented as separate words, with punctuation and capital letters, as 'How are you?'.²⁰ Choosing to use the grammar and spelling conventions of standard UK written English aids

readability, but at the same time irons out the linguistic variety which is an important feature of cultural and subcultural identity.²⁰ For example, the following extract represents a patient speaking a Cockney English dialect (typically spoken by working class Londoners), in consultation with a doctor speaking English with Received Pronunciation (typically spoken by educated, middle class English people):

Dr 1: so what are your symptoms since yesterday
(..) the aches

Pt B: aches ere (..) in me arm (..) sneezing (..) ed-ache

Dr 1: ummm (..) okay (..) and have you tried anything for this (..) at all?

Pt B: no (..) I ain't a believer of me- (..) medicine to tell you the truth

Although this attempts to represent linguistic variety, using a more literal spelling is difficult to read and runs the risk of portraying respondents as inarticulate and/or uneducated.²⁰ Even using standard written English, transcribed talk appears faltering and inarticulate. For example, verbal interaction includes false starts, repetitions, interruptions, overlaps, in- and out-breaths, coughs, laughs and encouraging noises (such as 'mm'), and these features may be omitted to avoid cluttering the text.¹⁸

If talk is mediated via an interpreter, decisions must be made about how to represent translation on a transcript,⁸ for example, whether to translate 'literally', and then to interpret the meaning in terms of the second language and culture. For example, from French to English, 'j'ai mal au coeur' translates literally as 'I have bad in the heart', interpreted in English as 'I feel sick'. Translation therefore adds an additional layer of interpretation to the transcribing process.

Written representations reflect researchers' interpretations. For example, laughter could be transcribed as 'he he he', 'laughter (2 seconds)', 'nervous laughter', 'quiet laughter' or 'giggling' and these representations convey different interpretations. The layout on paper and labelling also reflect analytic assumptions about data.²⁰ For example, labelling speakers as 'patient' and 'doctor' implies that their respective roles in a medical encounter are more salient than other attributes such as 'man', 'mother', 'Spanish speaker' or 'advice giver'. Talk is often presented in speech turns, with a new line for the next speaker (as in the data examples given), but could also be laid out in a timeline, in columns or in stanzas like poetry, for example.⁷ Transcripts are not therefore neutral records of events, but reflect researchers' interpretations of data.

Presenting quotations in a research paper involves further steps in reduction and representation through the choice of which data to present and what to

highlight. There is debate about what counts as relevant context in qualitative research.^{21,22} For example, studies usually describe the setting in which data were collected and demographic features of respondents such as their age and gender, but relevant contextual information could also include historical, political and policy context, participants' physical appearance, recent news events, details of previous meetings and so on.²³ Authors' decisions on which data and what contextual information to present will lead to different framing of data.

What equipment is needed?

Decisions about the level of detail needed for a project will inform whether video or audio recordings are needed.²⁴ Taking notes instead of making recordings is not sufficiently accurate or detailed for most qualitative projects. Digital audio and video recorders are rapidly replacing analogue equipment: digital recordings are generally better quality, but require computer software to store and process, and digital video files take up huge quantities of computer memory. It is

usually necessary to playback recordings repeatedly: a foot-controlled transcription machine facilitates this for analogue audio tapes (see Fig. 1) and transcribing software is recommended for digital audio or video files, since this allows synchronous playback and typing (see Fig. 2).

Conclusion

Representation of audible and visible data into written form is an interpretive process which involves making judgments and is therefore the first step in analysing data. Decisions about transcribing are guided by the methodological assumptions underpinning a particular research project, and there are therefore many different ways to transcribe the same data. Researchers need to decide which level of transcription detail is required for a particular project and how data are to be represented in written form.

Transcribing is an interpretive act rather than simply a technical procedure, and the close observation that transcribing entails can lead to noticing unanticipated phenomena. It is impossible to represent the full



FIGURE 1 Analogue audio recording equipment: dictaphone with microphone and mini-cassette tape and foot-pedal controlled transcription machine with headphones

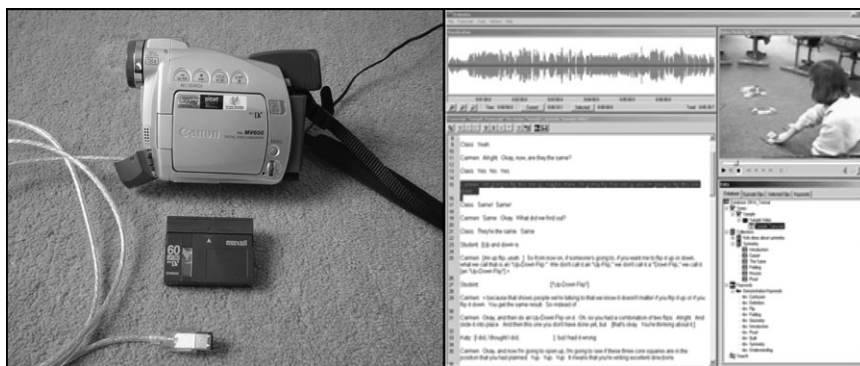


FIGURE 2 Digital video recording equipment: video camera with firewire computer lead, mini DV cassette and Transana transcribing software

complexity of human interaction on a transcript and so listening to and/or watching the ‘original’ recorded data brings data alive through appreciating the way that things have been said as well as what has been said.

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Appendix:

Transcription Conventions

(?)	talk too obscure to transcribe.
Hhhhhh	audible out-breath
.hhh	in-breath
[overlapping talk begins
]	overlapping talk ends
(.)	silence, less than half a second
(..)	silence, less than one second
(2.8)	silence measured in 10 ^{ths} of a second
....	lengthening of a sound
Beau- <u>he</u> says.	cut off, interruption of a sound
=	Emphasis
LOUD	no silence at all between sounds
?	sounds
(left hand on neck)	rising intonation
[notes, comments]	body conduct