MIND MAPPING AS A TOOL IN QUALITATIVE RESEARCH

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ABSTRACT Tattersall, C. et al (2007) Mind mapping as a tool in qualitative research. Nursing Times; 103: 28, 32–33. This article describes the concept of mind mapping in qualitative research. Although more academic research is required, theoretically mind mapping can allow researchers to make rapid and valid transcriptions of qualitative interviews without the need for those interviews to be transcribed verbatim. It may also aid in the analysis of qualitative data by helping researchers to ‘bracket’ their own preconceptions, which is fundamental in phenomenological research.

MIND MAPPING

The mind map is argued to be a powerful graphic technique that can be applied to every aspect of life where improved learning and clearer thinking will enhance performance, such as in note-taking, brainstorming, memorising or analysis.

A mind map starts life as a single blank sheet of paper. A question, title or central concept as an image or diagram is then placed in the centre of the page, with subheadings or related themes branching off (created as ideas come to mind in brainstorming, or as subjects in a lecture are addressed), with each branch having an associated image or word on it. These branches can then be subdivided or related to other branches.

There is guidance for maximising the use of mind maps but there are no set rules. Each user is free to develop her or his own system or code of shapes, colours, lines or symbols. Information is converted into a combination of written, diagrammatic and graphical representation, allowing related ideas, concepts or themes to be linked or integrated with each other both on paper and in the user’s mind (Buzan, 1997). The cerebral cortex in the brain is responsible for such things as abstract thinking and complex cognitive activity, and it is this area of the brain that, it is claimed, mind mapping can optimise. In order to use the full power of the brain, the mind map uses a combination of words and images, which is claimed to harness the full range of the brain’s cortical skills (Buzan, 2003).

A fundamental concept behind mind mapping, as argued by Buzan (2003), is what he calls ‘radiant thinking’. This is a term given to the brain’s associative thought processes that derive from a central point, allowing concepts to be integrated and links to be made. Mind mapping is developed as an expression of radiant thinking, and is theoretically therefore a natural technique for maximising the brain’s potential. The brain will then work more effectively by integrating and linking concepts, rather than in traditional lines, as in text (Buzan, 1997). Therefore, following the arguments made by Buzan, mind mapping should prove ideal for brainstorming, memorising and organising. There is much reported evidence on this but little based on research, although mind mapping has proven effective in medical education (Farrand et al, 2002).

PHENOMENOLOGY

For many experienced researchers qualitative research remains a foreign concept in an environment where the facts and figures of quantitative research are seemingly more respected by the health professions and are often perceived to be more influential on practice. Qualitative research, however, is a valid tool for examining healthcare. Instead of attempting to explain why something happens (as in quantitative research), qualitative research seeks to understand the interpretations or motivations of those involved in the care, be they patients or staff, which will always be an important aspect to understand in modern healthcare.

A commonly used method of qualitative research is phenomenological enquiry, in which an attempt is made to interpret people’s perceptions of reality, often by individual semi-structured interviews. In phenomenological research, any preconceived ideas about the subject in question should be suspended by the researchers, so that the true phenomena can be revealed. This concept is termed ‘phenomenological reduction’ or ‘bracketing’ (Whiting, 2001). Theoretically, the patient’s perceptions and experiences of the reality are then explored in a non-judgemental way (Giorgi, 1997).

PHENOMENOLOGICAL ENQUIRY

Transcribing

Probably the most commonly produced raw data in qualitative research is the written transcription, derived from tape-recorded interviews. Analysing transcriptions in
qualitative studies that are poorly conducted goes against the fundamental concept behind qualitative data. This is because written transcriptions cannot be considered methodologically sound if the only information contained within them is text, when a good deal of communication is non-verbal or given as verbal emphasis during an interaction.

In good qualitative research, notes are taken regarding aspects of the interaction such as non-verbal communication. However, integrating the transcribed text with the notes may require a good deal of time and effort. A more valid data analysis would allow all aspects of communication to be considered soon after the interaction, using the raw data (that is, the tape recording) as much as possible.

A tool that may assist in this regard is the mind map. Notes or a mind map of these non-verbal aspects during the interview could be combined with a mind map of the interaction immediately after the interview by listening to the recording (possibly several times) and mind mapping at the same time.

The biggest potential lies in using mind mapping as a real-time transcribing tool. Note-taking is essential during qualitative interviews but it would take little or no additional time or effort to conduct a real-time transcription in the form of a mind map.

Mind mapping during an interaction could be considered as a barrier to a valid interaction (although probably no more than note-taking). However, a mind-mapping researcher could potentially be an observer of the interaction. Observational research is therefore a huge area for future discussion and potential, for example in ethnographic research.

Bracketing

In analysing pure text, such as in traditionally transcribed qualitative interviews, the brain may be too restricted, not being allowed to make connections or think freely; therefore this does not allow true ‘bracketing’ of preconceived ideas of the research team, essential in phenomenological analysis.

In discussing the Husserlian concept in discovering the essence of a phenomenon, Giorgi (1997) described the use of a method called ‘free imaginative variation’, whereby the researcher has the ability to ‘awaken possibilities’, allowing her or him to become aware of features of the phenomenon that are essential but not immediately obvious.

If conducted correctly, mind mapping should lend itself well to this style of thought process, as it allows free thinking or, as Buzan (2003) stated when discussing the aims of creative mind mapping, it enables the researcher ‘to clear the mind of previous assumptions about the subject’.

Analysis of qualitative data

In qualitative research the raw data (often in the form of transcribed text) is broken down into emerging themes, and then findings are derived from these themes. There is no formula for the analysis of qualitative data, only guidance (Whiting, 2001), with the findings being unique to the investigator, yet remaining valid if methodologically sound techniques are used.

The general process is described below:

- Familiarisation: immersion in the raw data;
- Identifying themes: key issues, concepts and themes derived from the raw data. The data will be labelled and categorised into manageable chunks;
- Indexing: linking these identified themes or concepts throughout all respondents’ data;
- Charting: rearranging the data into ‘charts’ containing the relevant data from various respondents;
- Mapping (not mind mapping): using the charts in order to help define the phenomena, find associations and provide explanations relating to the original aims or research question.

With the use of mind mapping in the transcription of a qualitative interview, the boundary between transcribing and analysing may become blurred. The process of transcribing using a mind map will allow the development of creative thinking, with links being made between themes or statements in real time as the transcribing is going on.

‘Familiarisation’ could be achieved far more easily by listening to the interview numerous times than by waiting for typed transcripts (as in traditional research). There is also a potential benefit from there being a short time delay between interview, transcription and analysis.

Transcribing, ‘familiarising’ and ‘identifying themes’ could therefore become one whole process with the use of mind mapping. This is a radical view, perhaps, but worthy of consideration if mind maps are to be used to their full potential.

CONCLUSION

Mind mapping may allow researchers to transcribe non-verbal as well as verbal aspects of an interaction in real time, giving a realistic interpretation of all aspects of the interaction. Mind mapping may also aid researchers in the analysis of the data by giving them the ability to ‘bracket’ their own preconceptions, which is a fundamental requirement when carrying out phenomenological research.

REFERENCES


