

**DATA ANALYSIS IN HEALTH-RELATED QUALITATIVE RESEARCH**

Dear Sir,

Qualitative research has seen an increased popularity in the last two decades and is becoming widely accepted across diverse health-related researches. There has also been a corresponding rise in qualitative publications in medical and health-related journals. The increasing popularity of qualitative methods is partly due to its capabilities to explore the perspective and meaning of experiences, seek insights and identify social structures or processes that explain behaviours of people who suffer from a medical condition. For this reason, qualitative research in healthcare is particularly useful in the study policies for changing health behaviour, where health or education policies can be effectively developed if reasons for behaviours are clearly understood when it is observed or asked using qualitative methods.<sup>(1)</sup> Qualitative research allows researchers to uncover unexpected or unanticipated information, which is not possible via quantitative methods.

Qualitative research mainly yields unstructured text-based data such as interview transcripts, observation notes, diary entries, or medical and nursing records. Data analysis in qualitative research basically involves *coding* or subdividing the huge amount of textual data into segments, examining the data similarities and differences, grouping conceptually similar data together, and finally building a logical chain of evidence or theory.<sup>(2)</sup>

Traditionally, coding was done manually, by use of coloured pens to categorise data, and consequently cutting and sorting the data. With the advent of software technology, computer-assisted qualitative data analysis software (CAQDAS), such as NUDIST, NVivo and Atlas-ti, the process has been greatly simplified from the traditional tedious one. The software enhances the efficiency and effectiveness of the analysis process in several ways. Firstly, CAQDAS enable researchers to store data documents, easily assess and retrieve them, and also allow researchers to place a hyperlink to other files (e.g. radiology film, surgery video, and image files) in the documents to capture conceptual links which are observed during the analysis. Secondly, in the coding process, it assists researchers in highlighting and applying codes to represent themes or categories, and subsequently allows them to be saved in database as nodes. The software allows the nodes to be easily reordered, duplicated, merged or removed, to help visualise and locate analytical categories. Some of the softwares, such as NVivo, even allows for qualitative linking, shaping and model building.

Computer packages have clear advantages and can greatly enhance research quality, as outlined above. Unlike statistical software, which does data analysis, qualitative software does not analyse the text. In qualitative data analysis, the researchers' analytical skills are needed to synthesise the text, identify linkages and develop hypotheses. In essence, CAQDAS merely streamlines the manual process of cutting, sorting, pasting and retrieving data, thus making data analysis more efficient and manageable.

To summarise, qualitative research undoubtedly has been advanced greatly by the development of CAQDAS. Analysis of qualitative data is now more systematic and more easily carried out. The use of qualitative methods in health-related research is postulated to gain popularity and to grow exponentially in years to come with the development of CAQDAS.

Yours sincerely,

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