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Writing a qualitative research report

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Summary A research project in nursing or nursing education is probably only complete once the findings have been published. This paper offers a format for writing a qualitative research report for publication. It suggests, at least, the following sections: introduction, aims of the study, review of the literature, sample, data collection methods, data analysis methods, findings, discussion, conclusion, abstract. Each of these sections is addressed along with many written-out examples. In some sections, alternative approaches are suggested. The aim of the paper is to help the neophyte researcher to structure his or her report and for the experienced researcher to reflect on his or her current practice. References to other source material on qualitative research are given.
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Qualitative research continues to help researchers address issues in nursing and nurse education. This paper describes a layout of a qualitative research report, suitable for publication in a journal. Although the paper refers to qualitative accounts, the same principles may be applied to quantitative reports and those with mixed methods (Tashakkori and Teddlie, 1998).

There are, of course, no absolutes in this area. Some types of qualitative research will call for a different sort of report. The aim of this paper is to encourage the first-time researcher to write up their work in a systematic way. The paper may also help the experienced research to think about the issues through a critique of this article.

Given the confines of a paper in a journal of this sort, certain conventions have been adopted throughout. Examples of text are offered, to illuminate the points being made. In these text samples, the indicator (ref) or (refs) is used to show that references to the literature or research would be placed there. Given that the examples offered are fictitious, it is

not appropriate that 'real' references are offered. Where names of authors have been used, they are also fictitious. The subheadings in this paper (illustrated thus: *Literature review*) are used to indicate headings that might be used in the reader's report.

Other accounts of report writing of this sort are available (see, for example: Richardson, 1990; Hollaway and Wheeler, 1996; Burnard, 1996; Holliday, 2001). As with any writing, some general principles apply: writing should be clear, simple and accurate.(Gillett, 1990; Strong, 1991; Kirkman, 1992). The research account should report all aspects of the work carried out and offer an appropriate selection from the findings.

Key sections of a published, qualitative research report are as follows and each will be dealt with in turn.

- Introduction
- Aims of the study
- Review of the literature
- Sample
- Data collection methods

- Data analysis methods
- Findings
- Discussion
- Conclusion
- Abstract

Introduction

This sets the scene and puts the research in context. If the research was about, for example, stress in nursing, the reader needs to know why the study was done and how it, broadly, relates to other research. It is useful to start with a sentence that describes exactly what the paper is about.

> This is an account of a descriptive study of stress in three groups of 10 nursing students in the UK. The study was a qualitative one involving interviews with a convenience sample of student nurses. Although there is a considerable amount of research carried out into whether or not nursing is stressful, there are still few studies of student nurses and stress (for examples, see Refs).

Aims of the study

Here, the author describes the research question or the aim of the study. Sometimes these amount to the same thing (e.g. 'The aim of this study was to address the question: 'are some student nurses stressed in their clinical and educational work settings?') It is important that, at the end of the paper, the author is able to reflect back on the degree to which the aim was or was not achieved. More help on writing aims and research questions can be found in: Denzin and Lincoln (1998a), Huberman and Miles (2002).

Review of the literature

Apart from simply offering an account of the research that has been carried out previously, the author should begin by describing *how* he or she searched the literature. This involves describing the computer search engines used and the keywords entered into those engines. As always, reviews of the research and general literature should be thorough and, if possible, systematic. The researcher should also indicate whether or not the 'grey' literature was reviewed. Grey literature is defined as:

> That which is produced on all levels of government, academics, business and industry in print and electronic

formats, but which is not controlled by commercial publishers (GL, 1999 Conference Program)

Something approaching a formula can be used for accounting for the researcher. The reader needs to know *who* did the research and *when*. *What was done* and *what was found*? Thus an example of such reporting might be as follows:

> In a small scale study of 12 student nurses in an Irish School of Nursing, Davis (Ref) undertook two rounds of interviews to establish the factors that those students felt contributed to their ability to cope with stress. He found that most students relied on family or friends for support. Some used stress reduction methods including breathing exercises, physical activities and diary keeping. Few expressed the view that they were unable to cope with stress. Ages and sex of the respondents are not quoted in the account of the study.

Key research reports should be cited in this way. Others can be grouped together. For example, if a number of studies have been carried out using similar methods, with similar findings, these can be quoted thus:

> A number of studies, using the Jones Personal Stress Inventory (Ref) — a free form reporting instrument — reported high levels of stress amongst younger students (Multiple Refs).

It is valuable if the writer can offer short, critical commentary on the studies reported in the literature. More can be found on the processes of searching the literature and doing it systematically in (Hill, 1993; Cooper, 1998; Chalmers and Altman, 1995; Cooper, 1998).

Sample

It is probably the case that convenience sampling is the most frequently used in qualitative studies. The reader needs to know the size and type of sample used in the reported study. If an unusual variant of sampling is used, it is useful to acknowledge the nature of it. Other comments about the sampling process may be helpful.

> A sample of 20 students, was invited to take part in the study. The sample was a convenience one and the snowball approach to sampling was adopted (Ref). Each respondent was asked to recommend to the researcher another student who might be able to articulate their views about stress. There appears to be no general agreement about sample size in qualitative studies. Reports describe single-person studies (Refs). Other commentators suggest sample sizes ranging from 6 (refs) to 30 (refs). It was felt that 20 respondents should be able to supply varied and detailed accounts for the purposes of this study.

Henry (1990) offers more details about the processes of selecting a sample from a total population

and Johnson (1991) discusses the issues involved in sampling for ethnographic research.

Data collection method

At this stage, views vary about what might next be reported. Sometimes, researchers and their supervisors suggest that all qualitative research should be carried out within a *theoretical framework*. Studies approached from this point of view adopt a particular theoretical position in relation to the data. However, it is just as valid to simply describe what the researcher was aiming to find out, how the data were collected and analysed and what was found, without locating this in any particular framework. Phillips (1986) commented on this as follows:

> Some purists may regard research which is not based on theoretical frameworks or conceptual orientations, as problem-solving rather than scientific research. However, early studies in clinical nursing research tended to be problem-solving endeavours rather than scientific research. More recently, emphasis has been put on the use of theory as the appropriate grounding, but there is still room for work to be done in nursing while a theoretical base is being discovered (Phillips, 1986).

Arguably, we are still searching for that empirically grounded 'theoretical base' of which Phillips wrote about in nursing.

Again, in many qualitative studies (but not all) the data collection method is usually the interview method. How the interviews were carried out should be noted but this is not the place for a detailed critique of the interview process. An example of reporting here, might be:

> All students were interviewed by the researcher on two occasions, for between 30 and 45 min. All interviews were recorded, with the permission of the students being interviewed. After the interviews, the recordings were transcribed into computer files. Care was taken by the researcher to assure the respondents that they and the place of their work would not be identifiable in any subsequent report. Once the final research report was written, the tapes from the interviews were destroyed.

This example can be adapted for use with other data collection methods. The point, in most journals, is for the researcher to report what they did and not to offer a detailed review or critique of data collection methods. There is a considerable literature on the interview method and this and other qualitative data collection methods are discussed in the literature (Weller and Romney (1988); McCracken, 1988; Thomas, 1993; Coulon, 1995; Holstein and Gubrium, 1995; Morgan, 1997; Stewart, 1998; Stouthamer-Loeber and van Kammen, 1995; Gillham, 2000; Fowler, 2001; Yin, 2001).

Data analysis methods

A variation is to be found in the amount of detail of reporting in this section. It is possible to describe, in full, how the researcher handled the data or it is possible to write that 'The interviews were recorded and transcribed. The researcher then sorted those data into a range of categories and these are reported below.'

A comfortable compromise between these two extremes is probably achieved by reporting a little of what happened. Care should be taken with very general terms such as 'content analysis', when reporting data analysis. The term is probably so broad as to have little meaning. An example of how part of this section might be written is as follows:

> All of the interview transcripts were read by the researcher and coded in the style of a grounded theory approach to data analysis (refs). Eight category headings were generated from the data and under these all of the data were accounted for. Two independent researchers were asked to verify the seeming accuracy of the category system and after discussion with them, minor modifications were made to it. In the grounded theory literature, a good category system is said to have 'emerged' from the data (refs). Other commentators have noted that, in the end, it is always the researcher who finds and generates that system (refs).

Again, there is a considerable literature on the subject of analysing qualitative data and examples of this are found in the following (Atkinson, 1992; Feldman, 1994; Altheide, 1996; Phillips and Hardy, 2002; Ezzy, 2002.)

Findings

A decision needs to be made, here, about whether or not (a) the researcher presents the findings on their own, without supporting discussion or (b) if he or she links the findings with the work of other researchers. It should be noted that what are found in a qualitative study are always 'findings' and not 'results'.

An example of the first approach is as follows:

Learning to cope

A number of respondents found that they learned to cope by talking about their stress to mentors, clinical practitioners and educators. In particular,

the found it useful to read widely on the topic as a way of attempting to understand what was happening to them. One suggested that:

> I think it takes the sting out of it really. Once you have some idea of what stress is about and what causes it, you can start to deal with it. The worse thing was, like, not knowing what was happening to me. I learned quite a bit from a computer search I did in the School.

Another respondent noted that simply understanding stress did not necessarily help you to cope with it.

> I dunno. I know the theories about stress but somehow, in the end, its you. You have to cope somehow. It's where the theory breaks down a bit. Knowing the theory doesn't always help you to cope.

An example of the second approach to presenting findings, where the research links the new evidence to other research, is as follows:

Learning to cope

A number of respondents found that they learned to cope by talking about their stress to mentors, clinical practitioners and educators. In particular, the found it useful to read widely on the topic as a way of attempting to understand what was happening to them. This echoes the findings of Daniels (Ref) who found that 'educational therapy' in which students were helped to find as much information out about stress as they could, made a difference to their coping with it. One respondent suggested that:

> I think it takes the sting out of it really. Once you have some idea of what stress is about and what causes it, you can start to deal with it. The worse thing was, like, not knowing what was happening to me. I learned quite a bit from a computer search I did in the School.

Another respondent noted that simply understanding stress did not necessarily help you to cope with it. The respondent seems to indicate the gap that many psychological researchers have noted between cognitive understand and changed behaviour (see, for example, Refs).

> I dunno. I know the theories about stress but somehow, in the end, its you. You have to cope somehow. It's where the theory breaks down a bit. Knowing the theory doesn't always help you to cope.

As far as possible, the findings section should be exhaustive in reporting the data. However, given the restricted space of a journal paper, decisions have to be made about what to put in and what to leave out. A convention that appears to have arisen in reporting verbatim quotes under a particular category heading seems to be three or four items. Longer quotes are often better for preserving context. Short quotes can often, either be taken out of context or seem to offer little elaboration of an idea.

Also, if links are made to existing research, those links should be clear and obvious. There should be no sense of 'bending' the data to make what will be a spurious link with what has gone before. Enough evidence should be presented to establish that such links really are there. Other ways of describing findings are to be found in the literature (Riessman, 1993; Fetterman, 1996; Denzin and Lincoln, 1998b).

Discussion

The content of this section will be determined, to a considerable extend, on how the researcher has presenting findings in the previous one. If links are made to previous research and some sort of critical debate is offered, it might be decided that a separate discussion section is not required.

If the data were allowed, under the findings section, to stand on their own, then the discussion will enable the links to be made. Again, all that has been said, above, about offering substantial evidence that such links really do exist, applies here.

The discussion should stick to the findings. It is sometimes tempting for the researcher to *speculate* about the meaning of his or her findings or to try to 'get inside the head' of the respondent and somehow 'interpret' what that respondent meant. Arguably, though, the best approach is to both present the findings in a flat and factual way and to offer a discussion that never strays further than the limits of the data. However, it is also important that the findings *are* discussed and that the writer does not produce merely a bald account of some of his or her findings.

Conclusions

It is here that the research can both summarise his or her findings and suggest applications of those findings. Again, such applications should be realistic and no attempt should be made to extrapolate beyond the data. Arguably, it is impossible to generalise from qualitative data (because of the sampling methods, the ways of collecting data and the methods of analysis) — and most would say that it is not the point of doing qualitative research to generalise in this way. However, it is sometimes a temptation for the research to project his or her

findings into the future and to attempt to predict the implications of it through generalisation out to a larger population.

There is some debate amongst researchers about whether or not the researcher should offer an *evaluation* of the work, at the end of a paper. The researcher must decide whether or not to be critical of what he or she has done or to allow this function to rest with the reader. He or she should also be aware of the limitations of research itself (Shipman, 1997). Clearly there are many questions that research cannot answer and the researcher needs to be open to the possibility that his or her research does not answer all that many questions — and never answers any conclusively.

Abstract

The final part of the writing process is writing an abstract for the paper. This is the piece of the work that will represent the researcher on bibliographic search engines and it may be all that many readers know of the work. A good abstract should contain details of the background to the study, the aim, the sample, the data collection and analysis methods and a summary of the findings. Good and bad examples of abstracts can be found within the pages of any international journals.

Conclusion to this paper

This paper has offered an overview of the stages involved in writing a report of qualitative research. It has not attempted to debate many of the issues involved in *doing* research but has merely pointed to the issues that any researcher needs to address in preparing a report for publication. Individual researchers may have to make other decisions about the relative completeness of reporting under any of the above sections. Decisions, as we noted above, also have to be made about how many examples of the findings can be reported, because of length restrictions in journals.

Other issues that may be reported include: ethical approval and how it was obtained, funding sources and, in some cases — where a number of authors are involved in the paper — an account of the division of labour. Also, readers of the various journals may find that some favour a particular 'house style' when reporting research.

It is hoped that this paper helps the neophyte researcher and offers the more experienced one a chance to reflect on his or her own practice and, as appropriate, be critical of the approach adopted here. While there can never be a standardised template for writing research reports, certain features *always* occur in any account.

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