

Principles of verification in qualitative research

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Abstract

Most quantitative and qualitative researchers, as well as other interested parties, including occupational therapists, show concern regarding whether a research study is believable, and accurate. If research studies are based on haphazard methods, false findings and incorrect interpretation, clinical practice will possibly be erroneous. Thus, in health-care research, it is important to verify that the findings are the actual results and interpretations obtained and are an accurate representation of human experience.

The aim of this article is to discuss the principles of verification in qualitative research and considers their application to the different traditions of enquiry.

Introduction:

Verification and its need

Without rigour, research is worthless, becomes fiction, and loses its utility (Morse et al, 2002). Indeed, the quality of research is crucial both in qualitative and quantitative research. One of the fundamental issues in both research paradigms is whether the quality is sufficient to trust and accept the findings with confidence (Crookes and Davies, 1998).

In view of the importance of rigour in research, this work will mainly focus on verification and its strategies, which help in ensuring rigor and good quality research. Indeed, these brief paragraphs have indicated the importance and need of such a concept such as verification. For the purpose of this work, Creswell's

(1998) definition of 'verification' will be used. He described verification both as a process that occurs throughout the data collection, analysis and report writing of a study and, as standards, as criteria, imposed by the researcher and others after a study is completed. This work thus aims to compare qualitative verification with the positivist paradigm, as well as indicating its purpose within the qualitative paradigm. Different strategies for verification will then be described and critiqued.

Verification & the positivist paradigm

Despite the importance of having high research quality, there is great discussion regarding this issue between quantitative and qualitative paradigms, and within the paradigms themselves (Andrews, Lyne and Reiley, 1996).

Rigor in quantitative studies mainly revolves around validity and reliability. Reliability is the extent to which a test or an instrument such as a questionnaire gives consistent results (Burnard and Morrison, 1994; Crookes and Davies, 1998; McGuire et al, 2000; Mosey, 1996; Nelson, 1980; Royeen, 1989; Thomas and Nelson, 1996). On the other hand, in its broadest sense, validity is the extent to which a study, using a particular instrument, measures what it sets out to measure (Cormack, 1996; Crookes and Davies, 1998; Frankfort and Nachmias, 1996; Nelson, 1980). Statistical tests can test and measure validity. Indeed, there is sometimes also a failure to differentiate between the issues of quantitative validity itself, such as the validity of a measuring instrument, the validity of the interpretation of the data and the validity of the conclusions drawn from empirical research.

On the other hand, qualitative research methods have for long been criticised regarding rigor (Morse et al, 2002). The debate surrounding the methodological rigor of qualitative research is confounded by its diverse designs, by the lack of consensus about the rules to which it ought to conform, and by the issue

regarding whether it is compatible to quantitative research (Burns and Grove, 1993). These criticisms might have worsened with attempts to judge the rigor of qualitative studies using rules developed to judge quantitative studies (Burns and Grove, 1993).

Although this further highlights the importance of verification in qualitative research, there exists a gulf of different ideas regarding how to address verification in qualitative studies.

This tremendous discussion is expected when considering that in quantitative research, quality is reflected in narrowness, conciseness, and objectivity and leads to rigid adherence to research designs and precise statistical analyses (Burns and Grove, 1993). Research quality in qualitative research is associated with openness, thoroughness in collecting data, and consideration of all of the data in the subjective theory development phase (Holloway, 1997). Quality in qualitative research is also based, in part, on the logic of the emerging theory and the clarity with which it sheds light on the studied phenomenon. In qualitative research, each single experience is valuable. Qualitative research emphasises the uniqueness of

human situations and the importance of experiences that are not necessarily accessible to validation through the senses.

Despite these differences between the paradigms, one approach to address the verification issue was to import terminology from quantitative methods and to find analogues, which are applicable to qualitative work. However, Avis (1995) added that writers who adopt this position have suppressed the differences between the quantitative and qualitative paradigms.

Moreover, certain threats to internal and external validity in quantitative research are either generally inapplicable as evaluation criteria in qualitative research or they are minimized in quantitative research. For example, statistical regression and instrumentation are generally inapplicable criteria as there is often no testing of subjects per se in qualitative research. Regarding external validity, one might say that in qualitative research, the major purpose is to generate hypothesis for further investigation rather than to test them and so external validity will not be relevant (Sandelowski, 1986).

Therefore, some authors prefer to avoid the terms 'validity' and 'reliability' altogether. They argue that these concepts are based upon positivistic assumptions regarding instrumentalism, reductionism and objectivity (Avis, 1995). Thus, they use terms such as 'soundedness', 'authenticity and plausibility' and 'truth value' (Andrews, Lyne and Reiley, 1996; Carpenter and Hammell, 2000).

Yet, the qualitative researcher still has to provide descriptions and explanations that really emerge from the data and s/he is not permitted to make the data 'fit' any of the researcher's preconceived ideas. So, qualitative research still needs to avoid anecdotes and should be credible and truthful, and thus the importance of verification (Krefting, 1991).

Moreover, since qualitative research is not replicable, since it uses unique settings that change over time (different information may be obtained from asking the same questions to individuals), reliability as viewed from the quantitative perspective is impossible. From the qualitative perspective, it will imply the degree of consistency with which data are allocated to the same category either at

different times by the same researcher or by different researchers (Krefting, 1991).

Similarly, one must add that some authors claim that just as there is a need to look at the accuracy of various kinds of quantitative data in different ways, there is also the need to assess different qualitative studies through the most appropriate ways. For example, the phenomenological approach asks what it is like to have a certain experience. However, the goal of ethnography is to describe social complexities and thus may involve the development of theoretical constructs. Thus, Krefting (1991) concludes that although some principles are basic to all qualitative research, the incorrect application of the qualitative criteria of trustworthiness to studies is as problematic as the application of inappropriate quantitative criteria.

Strategies of verification and their application

Lincoln's and Guba's (1985) criteria are well developed conceptually and are the mostly used to assess the trustworthiness of qualitative research within health-care (Krefting, 1991). These criteria are credibility, dependability, confirmability and transferability (Creswell, 1998).

The qualitative criteria for truth value is credibility and roughly analogous to internal validity in quantitative research. It refers to the believability of the data (Masterson, 1998). Dependability of qualitative data, which relates to the consistency criterion, refers to the stability of data over time and over conditions (Polit and Hungler, 1995).

On the other hand, confirmability refers to data neutrality. Independent inquiry audits by external auditors can be used to assess and document dependability and confirmability (Cooper, 2000; Polit and Hungler, 1995). Finally, transferability refers to applicability and the extent to which findings from the data can be transferred to other settings or groups (Munhall, 2001; Rogers and Cowles, 1993).

Different strategies can be used to ensure credibility, transeferability, dependability and confirmability. In view of the fact that similar strategies can address different criteria, they will be all discussed as verification strategies.

Polit and Hungler (1995) described prolonged engagement as the investment of sufficient time in the data collection

activities to have an in-depth understanding of the culture, language or views of the group under study and to test for misinformation and distortions. It is also essential for building trust and rapport with participants (Polit and Hungler, 1995). On the other hand, persistent observation aims at achieving adequate depth of data but this may lead to problems such as making the researcher unable to separate his/her own experience from that of the informants and hence be unable to interpret the findings (Krefting, 1991). To counteract this problem, reflexivity may be useful. It refers to the assessment of the researcher's own background, perceptions and interests on the research process (Krefting, 1991). This can be enhanced through a field journal and reflexive diary, which can be helpful in ensuring verification in biography, phenomenology and ethnography (Creswell, 1998).

Another strategy involves triangulation. Its purpose is to provide a basis for convergence on the truth and helps credibility, dependability and confirmability (Kimchi, Polivka and Stevenson, 1991). Mason (1996) stated that triangulation encourages the researcher to approach the research

questions from different angles and in a multi-faceted way. For example, in ethnography, the researcher compares information from different phases of the fieldwork, from different points in the temporal cycles occurring in the setting and from different researchers (Creswell, 1998). Triangulation will also be helpful in case-study design. On the other hand, it is worth noting that Morse et al (2002) stated that confirmability and its strategies are not pertinent to phenomenology, nor to postmodern philosophies, whereby the investigator's experiences become part of data, and which perceive reality as dynamic and changing.

Polit and Hungler (1995) stated that two other important tools for establishing credibility are peer debriefing, wherein the researcher obtains feedback about data quality and interpretive issues from peers, and member checks, whereby informants are asked to comment on the data and on the researcher's interpretations. Creswell (1998) stated that having participants or peers reading drafts or repeating studies would help verification in ethnography and case study. Morse et al (2002) added that the problem of member checks is that, with the exception of case studies and narrative enquiry, study results have

been abstracted from across individual participants and thus, it may be difficult to recognise individual experiences.

Additionally, Baker, Wuest and Stern (1992) claimed that, in 1985, Lincoln and Guba have stated that the issue in any qualitative research is not whether another investigator would discover the same concepts to describe or interpret the data but whether the findings of an inquiry are worth paying attention to. In a phenomenological study this depends on the extent that they truly reflect the essence of a phenomenon as experienced by the informants of the study (Hallett, 1995). It is thus advocated that the phenomenological researcher returns to the informants to ensure that the findings reflect their perceptions of their experience (Hallett, 1995). However, it is worth noting that participants may be troubled if they become aware of the information that the researcher had garnered.

Moreover, one must remember that data collected solely through observation would not necessarily be accurate since the subject may be reacting to being observed. If using interviewing alone, this might lead the participant to state what is

socially desirable (Chenitz and Swanson, 1986). For example, factors such as interview questions, timing of interviews, interviewer behaviour and recording/transcription problems may all possibly alter the research's credibility if done in an incorrect way (Hutchinson and Wilson, 1992). Additionally, after coding a data segment, the researcher should leave some time and then try to recode it and then compare results (Chenitz and Swanson, 1986). Verification can also be enhanced through an external auditor. However, by time, the auditor might lose his objectivity.

One of the most delicate issues in verification is transferability since it is believed that generalisation in qualitative research should be avoided (Schofield, 1991). A consensus appears to be emerging that for qualitative researchers, generalisability is best thought as a matter of the 'fit' between the situation studied and others to which one might be interested in applying the concepts and conclusions of that study (Schofield, 1991). This conceptualisation makes in depth descriptions crucial so as to help others know how transferable the findings are. Another means of ensuring transferability is through the selection of

participants (Krefting, 1991). This may be helpful in qualitative research, whereby the researcher must also determine whether the observed events are the typical of the participants' lives (Krefting, 1991).

The foregoing discussion indicates that most of the strategies and criteria are applicable to many qualitative designs. At times, strategies are part of the data analysis (e.g. grounded theory) while others are employed after completion (e.g. phenomenology) (Creswell, 1998). Yet, Morse et al (2002) stated that the above-mentioned Lincoln's and Guba's strategies may be useful in attempting to evaluate rigor, but they do not ensure rigor and neither do they ensure that the research is relevant and useful. Hence, it is crucial that researchers plan how to substantiate the accuracy of their studies and use various verification strategies to ensure rigour in research studies.

Conclusion

When, as a qualitative researcher, one is fortunate enough to be part of others' lives, due respect must be paid to the rather small place occupied by your 'window' compared to the entire structure of the participants' lives. As qualitative researchers, therapists have a unique

opportunity to explore others' perceptions and experiences. By doing so, knowledge about phenomena has increased. With respect to client's experiences in occupational therapy and our professional activities, the task of building this knowledge is just beginning. The challenge before the profession is to do so in ways that are faithful to the research traditions. Issues of verification need to be well-looked at so that resources are not misused and practice will be based on sound knowledge. The increasing interest in rigour, verification and in establishing and maintaining excellent qualitative research is evidence that occupational therapists are taking up this challenge.

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