This is the Author’s version of the paper published as:

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**Year:** 2007  
**Title:** Appraising the trustworthiness of qualitative studies: guidelines for occupational therapists  
**Journal:** Australian Occupational Therapy Journal  
**Volume:** 54  
**Issue:** 2  
**Pages:** 88-94  
**ISSN:** 1440-1630.2007.00661.x  
**URL:** http://www.blackwell-synergy.com/doi/abs/10.1111/j.1440-1630.2007.00661.x  

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Appraising the trustworthiness of qualitative studies: guidelines for occupational therapists

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Word count: 3772 (not including references)
ABSTRACT

Qualitative research provides a valuable source of evidence to enhance occupational therapy practice. Occupational therapists need to consider the issue of trustworthiness prior to deciding whether the findings of qualitative research have relevance to their day-to-day work. By trustworthiness we mean the extent to which the findings are an authentic reflection of the personal or lived experiences of the phenomenon under investigation. In this article we provide guidance to enable occupational therapists to competently determine the trustworthiness of a qualitative research project. We do this by explaining, and illustrating with examples, six considerations that should be taken into account when determining whether the method, findings and interpretation of a qualitative research have been conducted in a trustworthy manner. These considerations are evidence of thick description, triangulation strategies, member checking, collaboration between the researcher and the researched, transferability and reflexivity. Once the trustworthiness of a qualitative research has been determined occupational therapists are in a better position to consider how the research findings may impact on their practice.
Appraising the trustworthiness of qualitative studies: guidelines for occupational therapists

Introduction

Using qualitative research is commonplace in studies exploring and investigating occupational therapy practice. Ballinger (2004) suggests that qualitative research is “particularly suited to researching the complexity and richness of occupational therapy practice” (p 540). This claim is supported by Hammell (2005) who states that when compared with quantitative research, qualitative research offer a “more complete and nuance understanding of the complex issues involved in health and health care” (p 131). The distinctions between these two broad research paradigms is further reinforced by Morse (2006a) who stressed that qualitative research addresses the confusing and chaotic problems that are too difficult to tackle using quantitative approaches. The belief that these types of problems are important is confirmed by Whiteford (2005a) who argues that qualitative research should be valued and represented, at the very least, on an equitable basis as quantitative research in terms of providing evidence for practice, rather than being low down on the hierarchy of evidence. She posits that qualitative research can provide sound evidence relevant to occupational therapy practice because this type of research:

- focuses on a person’s own perspectives, views and experiences;
- usually occurs in a naturalistic environment, and as such recognises the importance of understanding experiences in context
- allows for the continual discovery and exploration of new and emerging findings, and the opportunities to be responsive to these findings
- provides a basis for collaboration and partnerships between the participants and the researchers to be developed.

Within occupational therapy practice qualitative research approaches are considered to provide valuable sources of evidence. However, there is uncertainty among practitioners about how to appraise this type of research and apply findings to their practice. So while practitioners may have concerns about understanding the statistics integral to quantitative research articles, it is also possible for them to feel
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overwhelmed by the seemingly complex and incomprehensible philosophies and terminologies that underpin qualitative approaches that result in text-rich publications (Ballinger, 2004; Whiteford, 2005a). However, it is essential that practitioners learn to appraise the rigour of both the conduct and reporting of qualitative research to justify it’s role in informing client-centred, evidence-based occupational therapy practice (Carpenter & Hammell, 2000; Hammell, 2005). In this article we provide a guide for occupational therapy practitioners to determine the trustworthiness of qualitative research and applicability of the findings to their practice.

Guides for appraising a qualitative research article

Hammell (2005) states that “the procedure for critiquing qualitative research is not one of judging rigid adherence to rules or specific prescriptive criteria but is a process of weighing the various elements of the research in an effort to determine their appropriateness given the purpose and context of the study” (p 139). However, there is no agreement on the best way to judge narrative inquiry. Sparkes (1995) suggests that “the emergence of a multitude of criteria for judging both the process and products of qualitative research clearly signals that there can be no canonical approach to this form of inquiry, no recipes or rigid formulas, since different validation procedures or sets of criteria may be better suited to some situations and forms of representation than others. … The terrain upon which judgements are made is continually shifting and is characterised by openness rather than stability and closure” (p 185).

Several guides to appraising the published findings of qualitative studies have been developed to assist practitioners to scrutinise and determine their value. The guide for evaluating qualitative research articles often referred to by occupational therapists is one developed at McMaster University, Canada. This guide is available on the following website, [http://www.fhs.mcmaster.ca/rehab/ebp](http://www.fhs.mcmaster.ca/rehab/ebp) and in the book Evidence-based Rehabilitation (Law, 2002). It provides a structured format to consider the following sections of a qualitative research article: study purpose, literature review, research design and method, sampling, data collection, data analysis, trustworthiness and, finally, the conclusion. Taylor (2000) presented a similar guide to evaluating qualitative research articles in her book on evidence-based practice and
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Fossey et al (2002) take the reader through the process of appraising a qualitative research article by discussing what to consider in each section of the article, illustrating their explanations by referring to different published articles. Carpenter and Hammell (2000) similarly provide a structure for appraisal that focuses on different sections of the research report/publication. One or more of these guides are likely to be very useful to readers when appraising the value and rigour of qualitative studies of relevance to their practice. However, the focus of this article is on equipping readers with the knowledge necessary to judge the trustworthiness of the qualitative research article. This is because we believe that this aspect of critical appraisal is the key to determining whether the findings of a qualitative research article are acceptable as evidence for practice.

Focus on trustworthiness

Law (2002) suggests that establishing the trustworthiness of research “increases the reader’s confidence that the findings are worthy or attention” (p 337). Nevertheless, determining whether a published qualitative research article has trustworthiness is a complex task, particularly because there is not one agreed set of criteria to apply. Some definitions of trustworthiness tend to relate it back to a quantitative evaluation of quality. This is clearly illustrated by Jackson (2003), who states that trustworthiness refers to the process of establishing the validity and reliability of qualitative research. These concepts of validity and reliability are usually associated with judging the rigour of quantitative research. However, it has become common practise for qualitative researchers to avoid using quantitative terminology when describing measures to evaluate and appraise their research. This is partly due to the realisation that the agendas and conduct of these two board research approaches are different (Morse, 2006b). As an example of this, Morse (2006b) suggests that within health, quantitative research tends to focus on the efficacy of treatments and interventions, while qualitative research addresses complex problems, such as the perceptions of care. Hence, it is important to use terminologies and concepts that are more appropriate to the philosophies underpinning qualitative methodologies. In the light of this, the concept of trustworthiness refers to the extent to which the findings are an authentic reflection of
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the personal or lived experiences of the phenomenon under investigation (Barbour, 1998).

Researchers employ many strategies in the conduct of qualitative inquiry, and in the presentation of their findings, to establish the trustworthiness of their research. Krefting (1991) argues that for the trustworthiness of a qualitative research to be transparent, researchers need to clearly describe the strategies they used within their research articles. When appraising the trustworthiness of a qualitative research article readers need to consider how the researchers have included and addressed various quality criteria both in the research process and the reporting. This involves looking for evidence of a full description of the setting, participants and the events investigated within the methods and findings sections. In addition, the reader should also look for evidence of triangulation, member checking, collaboration, transferability and reflexivity (Jackson, 2003; Krefting, 1991; Law, 2002). Each of these will be described in more detail and illustrated by referring to published research articles. Readers are encouraged to read each article to gain a fuller understanding of the concepts.

A thick description

A thick description of the research process and findings is essential for a reader to clearly follow what was done. Thick description, a term introduced to anthropology by Geertz (1973), involves providing a detailed description of the context and circumstances surrounding the phenomena being studied, so that the meaning and importance of behaviours and events can be fully understood. This requires the researcher to provide a rationale for the chosen method, clarify the research process, fully document the methods of data gathering, provide detail of the raw data generated, and finally to specify the analysis process undertaken (Higgs, 2001). So the term ‘thick description’ is used to contrast it with a thin description, being one from which these details cannot be readily understood. Hence, upon reading the research, the reader should sense that as much detail as possible has been given about various aspects of the research. A thick description should also provide detail on the other quality measures that have been used to ensure trustworthiness in the research process and reporting. Wilding et al (2005) demonstrated the use of thick
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description by providing a clear rationale for the use of an Heideggerian phenomenological approach in their research investigating the experiences and meanings of spirituality and occupation of people who have experienced mental illness. A further example of a thick description can be found in Whiteford’s (2005b) exploration of the concept of occupational deprivation, in which she included substantial chunks of narrative from a Kosovar refugee whom she interviewed, along with an interpretive commentary, to enable readers to follow the analytical process.

**Triangulation**

Farmer et al (2006) state that the term triangulation was originally used by surveyors to refer to the method used in determining the position of a single point using observations from two additional points. A paper published by Campbell and Fiske in 1959 is believed to be the first research article to have formally used triangulation as they used two methods to study the same phenomenon to enhance the validity of their findings (Parry, 1991; Seale, 1999; Shih, 1998). However, it was Denzin (1970) who encouraged qualitative researchers to embrace this concept by stating that by “combining multiple observers, theories, methods and data sources [researchers can] overcome the intrinsic bias that comes from single-methods, single-observer and single-theory studies” (p 313).

Within research, there are two purposes of triangulation, these being confirmation and completeness (Shih, 1998). Confirmation is the use of two or more data collection instruments and techniques to overcome the bias of using a single-method, single-observer or single theory approach (Begley, 1996; Shih, 1998). This increases the credibility and validity of the findings owing to the convergence and corroborator of data (Connelly, Bott, Hoffart, & Taunton, 1997). Although this purpose of triangulation has relevance for qualitative research studies, it is more suited to quantitative studies (Begley, 1996; Farmer et al., 2006; Morgan, 1998). The reasons for this are related to the uncertainty of not knowing what to do with findings that did not converge and to the amount of effort required to produce the narrow goal of confirmation.
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Farmer et al (2006) suggests that, rather than aiming for convergence, triangulation is better used to capture a holistic view of the phenomenon being studied. This is referred to as completeness and is suited to qualitative research. Using triangulation in this way offers depth and breadth leading to a greater understanding of the phenomenon as each research strategy used contributes a different piece to the puzzle. Each strategy chosen offers another unique perspective on the phenomenon. Triangulation used for the purpose of completeness means divergent results can enrich the explanations for the phenomenon rather than leaving the researcher puzzled with what to do with results that do not converge (Redfern & Norman, 1994).

Patton (1990) argues that triangulation within qualitative methods “will seldom lead to a single, totally consistent picture … The point is to study and understand when and why there are differences … At the same time, consistency in overall patterns of data from different sources and reasonable explanations for differences in data from divergent sources contribute significantly to the overall credibility of findings” (p 468-469). In qualitative research, Denzin (1989) suggests that there are at least three types of triangulation: data triangulation, researcher triangulation and methodological triangulation.

Data Triangulation

Data triangulation is the use of a variety of different sampling strategies and sources to gather information and obtain a diverse view of the same phenomenon (Begley, 1996). When using data triangulation the researcher is attempting to maximise the range of data, which might contribute to a more complete understanding of a phenomenon (Knafl & Breitmayer, 1991). The researcher is comparing and cross-checking the consistency of information gathered at different times and by different means (Patton, 1990). This may involve comparing the perspectives of people from different viewpoints (e.g. individuals, groups or institutions) or checking for consistency of what people say about the same thing over a period of time. There are three categories of data triangulation: time, space and person (Denzin, 1989).
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*Time triangulation* refers to the collection of data at different intervals (e.g. days, weeks and/or months). For example, Dady and Rugg (2000) used time triangulation to determine the change in individuals’ expectations and experiences of their admission to and stay on an elderly care unit. Semi-structured interviews were conducted twice with each participant: within three days of each person’s admission and within two weeks of their discharge. To gain a detailed understanding of their pain experiences, Presnell (2005) also used multiple in-depth interviews with 19 individuals who had distal symmetrical polyneuropathy (DSPN) the commonest neurological manifestation of Human Immunodeficiency Virus (HIV). He interviewed them on four separate occasions: at entry to the HIV treatment facility, and then at 6, 12 and 18 months following the initial interview. This helped him to gain a detailed understanding of each individual’s pain experiences.

*Space triangulation* is the collection of data about the same phenomenon in two or more settings to investigate the consistency of the data across sites (Shih, 1998). Green and Cooper (2000) used space triangulation when they conducted semi-structured interviews with the matrons of 20 nursing homes in the north-west of England to determine the philosophy of care, the daily routines and the approach to activity provision for the elderly residents. Although the authors only focused on one geographical area they were attempting to gather information from all the nursing homes within that area. Space triangulation is also useful when researchers want to understand how context shapes the issues being explored. For example, In their research investigating how people with dementia respond to the problems and changes that they experience in everyday occupations, Nygard et al (2002) interviewed and observed their study participants both in an outpatient unit and in their own homes. As a result they found their participants responded more effectively within a familiar environment.

*Person triangulation* is the collection of information from more than one level of persons, including individuals, groups (dyads, families or groups) and collectives (communities, organizations or societies (Kimchi, Polivka, & Stevenson, 1991). For example, Honey (2004) conducted 76 interviews and two focus groups, involving 41 people using mental health services to explore their perceptions of the benefits and drawbacks of employment. The interviews allowed individuals to share personal
experiences, while the focus groups enabled participants to reflect and build on other group members’ responses. As a result, Honey was able to gather both depth and breadth in perspectives, so as to appreciate the range of issues that people with mental illness weigh up in relation to employment.

Researcher Triangulation

Researcher triangulation occurs when two or more skilled researchers are involved in the analysis of the data in an attempt to compensate for single-researcher bias (Denzin, 1989). Watts and Carlson (2002) employed research triangulation in their research exploring the experiences and perspectives of occupational therapists who worked with indigenous people in Australia. Interview data gathered was analysed separately by two researchers before discussing their individual analysis. This strategy was also employed by Barbara and Whiteford (2005) in their study investigating the clinical utility of the Handicap Assessment and Resource Tool (HART). The two authors worked together to analyse the transcripts and identify the major themes and subthemes. In their research investigating how men who had a stroke managed their time within the first few weeks following discharge from hospital, Rittman et al (2004) used a team of four researchers to analyse the data using coding and constant comparative analysis.

Methodological Triangulation

Methodological triangulation is the use of two or more research methods or approaches in one study. There are two types of methodological triangulation: across-method and within-method (Begley, 1996; Shih, 1998). Across-method triangulation refers to the use of both qualitative and quantitative approaches in a study to investigate the same phenomenon. To illustrate, Curtin and Jaramazovic (2001) initially used focus groups to gather information on occupational therapists’ views and perceptions of evidence-based practice. This qualitative data gathered was then used to develop a quantitative survey that was distributed to a large number of occupational therapists.
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Within-method triangulation is the use of two or more different methods from within a particular methodological approach to measure the same phenomenon (Begley, 1996). For example, in ethnographic research, the use of participant observation and interviewing would exemplify within-method triangulation. In their phenomenological study, Lyons et al (2002) used within-method triangulation to investigate the occupational experiences of men and women with a life-threatening illness who attend a day hospice programme. They conducted three focus groups, individual interviews and observations, which allowed them to gather detailed data from their participants.

Member checking

Another strategy through which researchers may try to ensure the trustworthiness of their research is to conduct member checking (Law, 2002; Neuman, 2003; Punch, 2005). This refers to the involvement of participants in the data analysis process, providing opportunities for them to read, comment on and contribute to the findings. Thus member checking is a way of finding out whether the data analysis is congruent with participant's experiences. Researchers can learn a great deal about the accuracy, fairness and validity of their data analysis when participants review the findings. For example, in the aforementioned study by Lyons et al (2002), the participants’ comments on the preliminary interpretation of the data were actively sought as a means of ensuring that researchers were authentically representing the participants’ occupational experiences following diagnosis of a life-threatening illness. In another phenomenological study exploring how caregivers of people with Alzheimer’s disease achieve restorative mental breaks, Watts and Teitelman (2005) involved the participating caregivers in reviewing the categories, definitions and supportive quotes that the researchers developed during the analysis. In their study investigating the life stories of young people with motor impairments Curtin and Clarke (2005) instigated member checking strategies with the participants to ensure that the resultant biographies and interpretations were representative of the young people’s experiences. In each of these examples, the researchers have made significant attempts to ensure the authenticity of their findings, so that the readers can have greater trust that the findings are representative of the participants’ perspectives.
Collaboration

The degree of collaboration between researchers and participants will contribute to the extent to which qualitative research succeeds in its aim to privilege the perspectives, views and experiences of the research participants. The degree of collaboration can contribute to the trustworthiness of the qualitative research. Entering into a research partnership such that participants are considered researchers and are actively involved in the design and implementation of the research as well as the analysis characterises research with a high degree of collaboration. This type of participatory research is relatively unusual, but of growing interest for occupational therapists interested in involving people of traditionally unequal power and status in research (Fossey et al., 2002). One example of this type of collaboration is a study by Krupa et al (2005), involving a research team comprising two researchers from occupational therapy, nursing and six researchers with experience of using community mental health services in Ontario, Canada. Together, they designed a study to explore other mental health consumers’ experiences of community mental health services, including developing the questions asked and the approaches used to engage participants in the study, and conducted and analysed data from six focus groups. A further example of collaboration is provided by Arvay (2003) who used a collaborative narrative method to make the relationship between the researcher and the participants equal in her research, as a way of dealing with issues around voice and representation. She engaged her participants both in the production of their biographies and in the analysis of the data. Much qualitative research does not seek to diminish the distinction between ‘researcher’ and the ‘researched’ to this extent. Nevertheless, when appraising a qualitative article the degree of collaboration should be a consideration by looking for the kinds of strategies used to actively involve participants throughout the research process. The examples of member checking strategies referred to in the previous section provide evidence of a degree of collaboration between researchers and the participants.

Transferability
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In general, qualitative approaches do not claim to be generalizable, a claim often made of quantitative research approaches, particularly as a measure of their external validity. However, in aiming for credibility or authenticity, the findings of qualitative research projects should be transferable. Readers of qualitative research articles should, from the detail provided, be able to determine if the findings can be applied to other contexts. Hence, there should be a detailed description of the participants to enable the reader to make comparisons with other individuals and groups, to their own experiences or to other research findings.

Reflexivity

Reflexivity involves the direct acknowledgement by the researcher that he/she is an active participant throughout the research process and, therefore, has a significant influence on the development of the research and the engagement of the participants (Finlay, 2003). Researchers need to be explicit about personal biases, assumptions and values that they hold as these have some influence on the research process. In being explicit, the researcher is attempting to ensure that the findings are reflective of the participants’, rather than the researcher’s, perspectives. In essence, the researcher has to be up front about the reflexive process (Finlay, 1998, 2003) to demonstrate their learning or change in thinking that has come about through engagement with participants in the study. Strategies reported in research articles show evidence of reflexivity include the researcher keeping a journal to examine the impact of their interactions and thoughts, turning their subjective experience into an opportunity to enrich the research findings (Davis, Watson, & Cunningham-Burley, 2000; Finlay, 2003; Gough, 2003). Providing details about the researchers’ backgrounds and interest in the topic being investigated, as Watt and Teitelman (2005) did in reporting on their study of restorative mental breaks for caregivers of people with Alzheimer’s disease, is another way that researchers can demonstrate that they have considered the issue of reflexivity.

Conclusion

Occupational therapists are encouraged to embrace the art of reading qualitative research articles with a critical mind and to develop competence in gauging the
merits of these articles so that their practice has a sound evidence base. When determining if the findings of a qualitative research article have relevance to their practice, occupational therapists must reflect on the trustworthiness of the research and look for evidence of thick description, triangulation strategies, member checking, collaboration between the researcher and the researched, transferability and reflexivity. By focusing on these considerations occupational therapists can truly determine if a qualitative research project has contributed to a “more complete and nuance understanding of the complex issues involved in health and health care” (Hammell, 2005, p 131) and, as a result, whether the findings can be used to underpin their diverse, complicated and multifaceted practice.
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