

Guidelines for Critical Review of Qualitative Studies

Based on Guidelines for Critical Review Form-Qualitative Studies by

© Law, M., Stewart, D., Letts, L., Pollock, N., Bosch, J., & Westmorland, M., 1998

These guidelines accompany the Critical Review Form for Qualitative Studies developed by the McMaster University Occupational Therapy Evidence-Based Practice Research Group (Law et al. 1998). They are written in basic terms that can be understood by researchers as well as clinicians and students interested in conducting critical reviews of the literature.

Guidelines are provided for the questions in the left hand column of the form and the instructions/questions in the Comments column of each component.

CITATION

Include full title, all authors (last name, initials), full journal title, year, volume # and page #s. This ensures that another person could easily retrieve the same article.

STUDY PURPOSE

1. Was there a clear statement of the purpose and aims of the research?

The purpose is usually stated briefly in the abstract of the article, and again in more detail in the introduction. It may be phrased as a research question. A clear statement helps you determine if the topic is important, relevant, and of interest to you.

2. Is a qualitative methodology appropriate for this study?

LITERATURE REVIEW

3. Was relevant background literature reviewed?

A review of the literature should be included in an article describing research to provide some background to the study. It should provide a synthesis of relevant information such as previous work/research, and discussion of the clinical importance of the topic. It identifies gaps in current knowledge and research about the topic of interest, and thus justifies the need for the study being reported.

STUDY DESIGN

4. Is the study design appropriate for the research question and objectives?

- There are many different types of research designs. These guidelines focus on the most common types of qualitative designs in allied health research.
- The essential features of the different types of study designs are outlined to assist in determining which was used in the study you are reviewing.
- Numerous issues can be considered in determining the appropriateness of the design chosen.

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ETHNOGRAPHY

A well-known form of qualitative research in cultural anthropology, focuses on the question: “What is the culture of a group of people?” The goal of ethnographic research is to tell the whole story of a group’s daily life, to identify from participants the cultural meanings and beliefs they attach to activities, events, behaviors, knowledge, rituals and lifestyle. They also identify patterns of the group. Culture is not limited to ethnic groups, and ethnographers study the culture of organizations, programs and groups of people with common social problems such as smoking and drug addiction. In the area of health care, Krefting (1989) described a disability ethnography, which is a strategic research approach focusing on a particular human problem and those aspects of group life that impact on the problem.

Appropriate methods of data gathering and analysis include participant observation, unstructured interview, studying documents and photographs.

ETHNOGRAPHY EXAMPLE

A qualitative ethnographic study was conducted to explore the process and outcomes of a program of occupation for seniors with dementia. Data from observations, interviews with patients and staff, and field notes were analyzed to discover the opportunities and barriers to conducting an occupational program in a day hospital unit (Borell, Gustavsson, Sandman & Kielhofner, 1994).

PHENOMENOLOGY

Phenomenology answers the question: “What is it like to have a certain experience?” It seeks to understand the phenomenon of a lived experience - this may be related to an emotion, such as loneliness or depression, to a relationship, or to being part of an organization or group. The assumption behind phenomenology is that there is an essence to shared experience. It comes from the social sciences and requires a researcher to enter into an individual’s life world and use the self to interpret the individual’s (or group’s) experience.

Appropriate methods of data gathering and analysis include in-depth interviews, written anecdotes, philosophy, poetry or art. The experience provides the direction of the study.

PHENOMENOLOGY EXAMPLE

A phenomenological approach was chosen to explore the lived experiences of student occupational therapists during their first year of fieldwork placements. The focus of the study was on the acquisition of cultural competencies. Data were collected through individual interviews at baseline and after placement, supplemented by the students' journal entries. Two main themes emerged related to definitional issues about the concept of culture and the students' own identification within a culturally complex society (Dyck & Forwell, 1997).

GROUNDING THEORY

Grounding theory focuses on the task of theory construction and verification. The inductive nature of qualitative research is considered essential for generating a theory. It searches to identify the core social processes within a given social situation. Glaser and Strauss (1967) developed a research process that takes the researcher into and close to the real world to ensure that the results are "grounded" in the social world of the people being studied. This type of qualitative design is popular in the field of nursing research. Grounding theory studies interactions as they occur naturally.

Appropriate methods of data gathering and analysis for grounding theory are taped interviews, participant observation, focus groups, and diaries. The researcher identifies a key variable that explains what is occurring and further develops an emerging theory. The literature review occurs after the researcher identifies this theory. Data analysis compares the emerging theory with existing research and theories.

GROUNDING THEORY EXAMPLE

The grounding theory approach to data analysis (Glaser & Strauss, 1967) was used to explore enjoyment experiences of persons with schizophrenia. Interviews with nine participants focused on their descriptions of enjoyment. The themes that emerged from the data analysis helped occupational therapists gain a better understanding of enjoyment experiences of persons with schizophrenia, and the factors that characterized their enjoyment experiences (Emerson, Cook, Polatajko & Segal, 1998).

PARTICIPATORY ACTION RESEARCH

PAR is an approach to research and social change that is usually considered to be a form of qualitative research. PAR involves individuals and groups researching their own personal beings, socio-cultural settings and experiences. They reflect on their values, shared realities, collective meanings, needs and goals. Knowledge is generated and power is regained through deliberate actions that nurture, empower and liberate persons and groups. The researcher works in partnership with participants throughout the research process.

PARTICIPATORY ACTION RESEARCH EXAMPLE

A PAR study involved researchers working with parents of children with physical disabilities to discover environmental situations which presented substantial challenges to their children. Through focus groups and individual interviews with 22 families, participants identified environmental factors which supported or hindered the daily activities of their children. The participants came together after the interviews were completed to form a parent support and advocacy group, which has continued to advocate for change to environmental constraints in their community (Law, 1992).

OTHER STUDY DESIGNS

These are many other qualitative research designs described in the literature. They come from different theoretical traditions and disciplines, and some are extensions of the more popular ethnographic and phenomenological designs. Some of the most frequently described designs in qualitative literature include: heuristics, ethno methodology, hermeneutics, ecological psychology, and social interactionism. Readers interested in further inquiry of qualitative research designs are directed to the bibliography at the end of this document.

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SUMMARY OF STUDY DESIGN APPROPRIATENESS

The choice of qualitative research designs should be congruent with the following:

- The beliefs and worldviews of the researcher; i.e., the qualitative researcher usually expresses an interest in understanding the social world from the point of view of the participants in it, and emphasizes the context in which events occur and have meaning;
- The nature of the end results desired; i.e., the qualitative research is seeking meaning and understanding, which is best described in narrative form;
- The depth of understanding and description required from participants; i.e., qualitative research usually involves the exploration of a topic or issue in depth, with emphasis on seeking information from the people who are experiencing or are involved in the issue;
- The type of reasoning involved: qualitative research is oriented towards theory construction, and the reasoning behind data analysis is inductive; i.e., the findings emerge from the data.
- Crabtree and Miller (1992) suggest that the best way to determine if the choice of a particular qualitative research design is appropriate is to ask how the particular topic of interest is usually shared in the group or culture of interest. For example, if information about how clients responded to occupational therapy treatment is usually shared through discussion and story telling among individual therapists, then a phenomenological approach may be the most appropriate way to study this experience.

5. Was a theoretical perspective identified?

The thinking and theoretical perspective of the researcher(s) can influence the study. The researcher knows something conceptually of the phenomenon of interest, and should state the theoretical perspective up front.

QUALITATIVE METHODS

6. Does the study describe the methods used to generate data?

A variety of different methods are used by qualitative researchers to answer the research question. The most common ones are described here, with advantages and disadvantages of each.

PARTICIPANT OBSERVATION

- A participant observer uses observation to research a culture or situation from within. The observer usually spends an extended period of time within the setting to be studied and records ‘field notes’ of his/her observations. This type of research may be called “fieldwork”, which comes from its roots in social and cultural anthropology.
- Participant observation is useful when the focus of interest is how activities and interactions within a setting give meaning to beliefs or behaviors. It fits with the assumption that everyone in a group or organization is influenced by assumptions and beliefs that they take for granted. It is therefore considered the qualitative method of choice when the situation or issue of interest is obscured or hidden from public knowledge and there are differences between what people say and what they do.
- Participant observation can be time-consuming and costly, as it can take a long time to uncover the hidden meanings of the situation/context.

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INTERVIEWS

- An interview implies some form of verbal discourse. The participant provides the researcher with information through verbal interchange or conversation. Non-verbal behaviors and the interview context are noted by the researcher and become part of the data.
- Another term used frequently in qualitative research is 'key informant interviews' which refers to the special nature of the participant being interviewed - he or she is chosen by the researcher because of an important or different viewpoint, status in a culture or organization, and/or knowledge of the issue being studied.
- Qualitative interviews place an emphasis on listening and following the direction of the participant/informant. A variety of open-ended questions are chosen to elicit the most information possible in the time available.
- Interviews can be done relatively quickly, with little expense, and are useful when a particular issue needs to be explored in depth. However, the drawback to interviewing is related to the constraints imposed by language. The types of questions asked will frame the informants' responses, and this should be taken into account by the researcher.

FOCUS GROUPS

- Focus groups are a formal method of interviewing a group of people/participants on a topic of interest.
- The same principles used for individual interviews apply with focus group interviews - e.g. the use of open-ended questions, the focus on listening and learning from the participants.
- Focus groups are useful when multiple viewpoints or responses are needed on a specific topic/issue. Multiple responses can be obtained through focus groups in a shorter period of time than individual interviews. A researcher can also observe the interactions that occur between group members.
- The disadvantages of focus groups relate to the potential constraints that a group setting can place on individual's responses. Furthermore, the facilitator of the focus group must be skilled in group process and interviewing techniques to ensure the success of the group.

HISTORICAL RESEARCH

- Historical research involves the study and analysis of data about past events. The specific methods used are flexible and open because the purpose is to learn how past intentions and events were related due to their meaning and value. The historian learns about particular persons at particular times and places that present unique opportunities to learn about the topic of interest.
- Historical research can provide important information about the impact of the past on present and future events.
- It is a difficult research approach that requires the researcher to enter into an in depth learning process, to become intimately involved in data collection and to be a critical editor of texts. The researcher as historian must make explicit all observations and interpretations.

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OTHER QUALITATIVE METHODS

- Other forms of qualitative research methods include mapping cultural settings and events; recording, using either audio or visual techniques; life histories (biographies); and genograms. Some researchers consider surveys and questionnaires which are open-ended in nature to be qualitative methods if the primary intent is to “listen” to or learn from the participants/clients themselves about the topic of interest.

7. Was the method appropriate for the study design type?

SAMPLING

8. Were participants relevant to the research question and was their selection well reasoned?

Sampling in qualitative research is purposeful and the process used to select participants should be clearly described. Purposeful sampling selects participants for a specific reason (e.g., age, culture, experience), not randomly.

There are numerous sampling methods in qualitative research: the sampling strategies used by the researcher should be explained and should relate to the purpose of the study. For example, if the purpose of the study is to learn about the impact of a new treatment program from the perspective of all clients involved in the program and their families, the purposeful sampling method should be broad to include maximum variation in perspectives and views. On the other hand, if the purpose is to explore an issue in depth, such as the numerous factors and interactions that are involved in a family deciding when and where to place an elderly member in a nursing home, an individual, ‘key informant’ approach may be appropriate.

9. Was sampling done until saturation or redundancy in data was reached?

The main indicator of sample size in qualitative research is often the point at which redundancy, or theoretical saturation of the data, is achieved. The researcher should indicate how and when the decision was reached that there was sufficient depth of information and redundancy of data to meet the purposes of the study.

The sampling process should be flexible, evolving as the study progresses, until the point of redundancy in emerging themes is reached.

10. Was informed consent obtained and is it clear why some individuals chose not to participate?

The authors should describe ethics procedure, including how informed consent was obtained, and confidentiality issues.

DATA COLLECTION

11. Is there a clear and complete description of the site, participants and researcher's credentials? Is the role of the researcher and his/her relationship with participants and identification of the researchers assumptions clearly described?

In qualitative research, the reader should have a sense of personally experiencing the event or phenomenon being studied. This requires a clear and vivid description of the important elements of the study that are connected with the data, namely the participants, the site or setting, and the researcher.

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A vivid description of the participants, site and researcher should provide the reader with an understanding of the “whole picture” of the topic or phenomenon of interest. Any missing elements should be noted.

Qualitative research involves the “researcher as instrument”, wherein the researcher’s use of self is a primary tool for data collection. Documentation of the researcher’s credentials and previous experience in observation, interviewing and communicating should be provided to increase the confidence of the reader in the process. The researcher’s role(s), level of participation and relationship with participants also needs to be described, as they can influence the findings.

The researcher includes relevant information about the participants, often in the form of background demographic data. The unique characteristics of key informants help to explain why they were selected. The credibility of the informants should be explored. Particular to qualitative research, the types and levels of participation of the participants should also be described.

The researcher should declare his/her assumptions about the topic under study (“bracket assumptions”) to make the researcher’s views about the phenomenon explicit. The researcher’s bias and influence of their own point of view should be stated and discussed within the context of the study.

PROCEDURAL RIGOR

12. Was the data collection strategies comprehensive enough to support rich and robust descriptions of the observed events?

The researcher should clearly describe the procedures used to ensure that data were recorded accurately and that data obtained is representative of the ‘whole’ picture. All source(s) of information used by the researcher should be described.

13. Were the data collection methods appropriate for the research objectives and setting?

The reader should be able to describe the data-gathering process including issues of gaining access to the site, data collection methods, training data gatherers, the length of time spent gathering data, and the amount of data collected.

DATA ANALYSIS

14. Was the data analysis inductive and the findings adequately corroborated?

The researcher(s) should describe how the findings emerged from the data. The authors should report on the flexibility of the data collection process, as it responded to changes or trends in the data.

Different methods are used to analyze qualitative data - the reader should be able to identify and describe the methods used in the study of interest, and make a judgment as to whether the methods are appropriate given the purpose of the study.

15. Were findings consistent with and reflective of data?

The themes that were developed by the researcher(s) should be logically consistent and reflective of the data. There should be an indication that the themes are inclusive of all data that exists, and data should be appropriately assigned to themes/codes.

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16. Was a decision trail developed and rules of analysis reported?

The reasoning process of the researcher during the analysis phase should be clearly described. The process used to identify categories or common elements, patterns, themes and relationships from the data is important to understand, as it is complex. This process is best articulated through the use of a decision or 'audit' trail, which tracks decisions made during the process including the development of rules for transforming the data into categories or codes.

17. Was the process of transforming data into themes/codes described adequately?

The decision trail should also report on how data was transformed into codes that represented the emerging themes and interrelationships that provide a picture of the phenomenon under study. Often a qualitative researcher will use a specific analysis method, such as an editing style or a template approach (Crabtree & Miller, 1992). The methods used should be fully reported.

The rationale for the development of the themes should be described.

These steps in auditing the analysis process provide evidence that the findings are representative of the data as a whole.

THEORETICAL CONNECTIONS

18. Did a meaningful picture of the phenomenon under study emerge?

The findings should clearly describe theoretical concepts, relationships between concepts, and integration of relationships among meanings that emerged from the data in order to yield a meaningful picture of the phenomenon under study. The reader should be able to understand concepts and relationships, including any conceptual frameworks that the researchers propose. The findings should make sense with current knowledge about the phenomenon under study and the knowledge base of occupational therapy in general.

TRUSTWORTHINESS

Establishing trustworthiness ensures the quality of the findings. It increases the confidence of the reader that the findings are worthy of attention. Many different strategies are employed in qualitative research to establish trustworthiness (Krefting, 1991) and the researchers should report on the methods they employed.

19. Was triangulation reported?

A critical group of strategies used to enhance trustworthiness is triangulation. It involves using multiple sources and perspectives to reduce the chance of systematic bias. There are four main types of triangulation:

- **By source** - data is collected from different sources, e.g., different people, resources;
- **By methods** - different data collection strategies are used such as individual interviews, focus groups and participant observation;
- **By researcher** - which involves the use of more than one researcher to analyze the data, develop and test the coding scheme; and
- **By theories** - multiple theories and perspectives are considered during data analysis and interpretation.

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CONCLUSIONS

20. Were conclusions appropriate given the study findings?

Conclusions should be consistent and congruent with the findings as reported by the researchers. All of the data and findings should be discussed and synthesized.

21. Did the findings contribute to theory development and future practice or research?

The conclusions of the study should be meaningful to the reader, and should help the reader understand the theories developed. It should provide insight into important professional issues. The authors should relate the findings back to the existing literature and theoretical knowledge in practice. Implications and recommendations should be explicitly linked to practice situations and research directions.

- Burns, N. (1989). Standards for qualitative research. *Nursing Science Quarterly*, 2(1), 44-52.
- Crabtree, B.F. & Miller, W.L. (1992). *Doing Qualitative Research. Research Methods for Primary Care. Volume 3.* Newbury Park CA: Sage Publishing.
- Denzin, N.K. & Lincoln, Y.S. (Eds.) (1994). *Handbook of Qualitative Research.* Thousand Oaks, CA: Sage Publications Inc.
- Forchuk, C., Roberts, J. (1992). How to critique qualitative health research articles. Working Paper Series 92-2. Hamilton, ON: McMaster University System-linked Research Unit.
- Glaser, B. & Strauss, A.L. (1967). *The Discovery of Grounded Theory.* New York NY: Aldine.
- Krefting, L. (1991). Rigor in qualitative research: The assessment of trustworthiness. *American Journal of Occupational Therapy*, 45, 214-222.
- Krefting, L. (1989). Disability ethnography. A methodological approach for occupational therapy research. *Canadian Journal of Occupational Therapy*, 56, 61-66.
- Patton, M.Q. (1990). *Qualitative Evaluation and Research Methods.* Second edition. Newbury Park, CA: Sage Publications, Inc.
- Smith, S. E., Willms, D. G. (Eds.) (1997). *Nurtured by Knowledge: Learning to Do Participatory Action-Research.* Ottawa ON: International Development Research Centre.
- Borell, L., Gustavsson, A., Sandman, P., & Kielhofner, G. (1994). Occupational programming in a day hospital for patients with dementia. *Occupational Therapy Journal of Research*, 14(4), 219-243.
- Dyck, I., & Forwell, S. (1997). Occupational therapy students' first year fieldwork experiences: Discovering the complexity of culture. *Canadian Journal of Occupational Therapy*, 64, 185-196.
- Emerson, H. A., Cook, J. A., Polatajko, H., & Segal, R. (1998). Enjoyment experiences as described by persons with schizophrenia. *Canadian Journal of Occupational Therapy*, 65, 183-192.
- Law, M. (1992). *Planning for children with physical disabilities: Identifying and changing disabling environments through participatory research.* Unpublished dissertation. Waterloo, Ontario: University of Waterloo.