

Guidelines for Critical Review Form: Qualitative Studies (Version 2.0)

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Introduction

- These guidelines accompany the Critical Review Form: Qualitative Studies originally developed by the McMaster University Occupational Therapy Evidence-Based Practice Research Group and revised by Letts et al., 2007. 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.
- Examples relate to occupational therapy research as much as possible.
- These guidelines assist readers to complete critical appraisal of qualitative research articles. In recent years, there has been an increase in the number of meta-syntheses i.e., articles that examine more than one qualitative study and synthesize the data from these studies together. The approaches to conducting meta-syntheses are still emerging, and criteria for critical appraisal of meta-syntheses are not yet well-established. Over time, we anticipate that we may either revise this review form to incorporate meta-syntheses or develop another review form.

Critical Review Components

Citation

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

Study Purpose

- Was the purpose and/or research question stated clearly? - 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 of purpose or research questions helps you determine if the topic is important, relevant, and of interest to you.
- For future reference, it is useful to provide a summary of the purpose or research question in the comments section, so that you or someone else can quickly get a sense of the article.

Literature

- 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.

- The review of the literature could include both qualitative and quantitative evidence related to the study purpose.
- It identifies gaps in current knowledge and research about the topic of interest, and thus justifies the need for the study being reported. The justification for the study should be clear and compelling. Readers should be able to understand the researchers' thinking in conducting the study.
- Consider how the study can be applied to occupational therapy practice and/or your own situation before you continue with your review of the article. If it is not useful or applicable, go on to the next article.

Study Design

- What was the study design? There are many different types of research designs. These guidelines focus on the most common types of qualitative designs in rehabilitation 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.
- Some researchers will not describe their study using these design descriptions; they may simply refer to the research as a 'qualitative design'. In most cases, you should expect the authors to link their research to a specific research tradition, or justify why they have not done so. When reviewing articles in which the design is described only as qualitative, it can be useful to consider which of these traditions best matches the study you are reading; this will help you make a judgement about the appropriateness of the design, sampling, data collection and analyses.
- Numerous issues can be considered in determining the appropriateness of the design chosen. Some of the key issues are listed in the Comments section, and are discussed below.

Design Types

1. 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. Phenomenology's application to occupational therapy research is discussed in detail by Wilding & Whiteford (2005).

Example: A phenomenological approach was chosen to explore the experiences of people with arthritis who were participants in two different types of arthritis education groups. Data were collected through observations of the groups, individual interviews with group participants, followed by focus groups after initial analyses were completed. Three themes are discussed by the authors: validation through connection; restructuring illness identity; and perceptions of self and disease symptoms. The themes provided insights into notions underlying transformative learning theory (Ashe, Taylor, & Dubouloz, 2005).

2. Ethnography

- Ethnography is a well-known form of qualitative research in anthropology, and focuses on the question: “What is the culture of a group of people, or people in a particular setting?”. The goal of ethnographic research is to tell the whole story of a group’s daily life, to identify the cultural meanings, beliefs and social patterns of the group, and can include the description of material culture (buildings, tools, and other objects that have cultural meaning). 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.

Example: An ethnographic study was conducted to explore the process and outcomes of a program of occupation for seniors with dementia within a day hospital setting, which was the culture being examined. 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). Jung, Tryssenaar, & Wilkins (2005), in their ethnographic study, interviewed novice tutors and their tutor guides or mentors in order to understand the entry phase of “becoming a tutor” within the culture of problem based learning. The overarching theme was of story telling or an oral tradition within which novice tutors learned from their tutor mentors based on direct modeling and vicarious sharing of stories.

3. Grounded Theory

- Grounded theory focuses on the task of theory construction. The inductive nature of qualitative research is considered essential for generating a theory. The focus is on searching 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. More recently, Charmaz (2003, 2006) has argued that the ongoing work of Glaser (1978) and Strauss and Corbin (1990) has resulted in grounded theory becoming more objectivist (positivistic) and suggested that a more constructivist (interpretive) approach allows researchers to focus more on human agency, social and subjective meaning, and problem-solving practices and action. A grounded theory method is an emergent design dependent on continuous data analysis. The theory is seen as a developmental process and therefore is able to capture the nature of social interaction and its structural content.

Example: Grounded theory was used to explore the concept of playfulness in adults (Guitard, Ferland, & Dutil, 2005). Through interviews with a heterogeneous group of fifteen adults, and inductive analyses, the following components of playfulness were identified: creativity, curiosity, sense of humour, pleasure, and spontaneity. The analyses also resulted in the development of a visual model demonstrating the relationships among the components of the model.

4. Participatory Action Research (PAR)

- PAR is an approach to research and social change that can be considered a type 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. PAR can be time consuming because sometimes delays can occur when researchers from outside the community and community members need to negotiate phases in the research. Research describing PAR should ideally discuss the negotiation processes used in the research.

Example: Cockburn and Trentham (2002) share two examples of participatory action research projects in which they were involved. One project involved adults with mental illness working to create meaningful work experiences. The other involved older adults in a community capacity-building process related to identifying and addressing issues in their housing complex. Letts (2003) also shared a number of examples of participatory research projects that involved occupational therapists.

5. Other 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, ethnomethodology, institutional ethnography, hermeneutics, ecological psychology, feminism, and social interactionism. Readers interested in further inquiry of qualitative research designs are directed to the bibliography at the end of this document.

Appropriateness of Study Design

- 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.

- Was a theoretical perspective identified? The thinking and theoretical perspective of the researcher(s) can influence the study. The researcher should know something conceptually of the phenomenon of interest, and should state the theoretical perspective up front. For example, Ashe et al. (2005) presented findings from an earlier grounded theory study to explain the context of their project, and also discussed the link to adult learning theory.

Qualitative Methods

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

1. Participant Observation

- A participant observer uses observation to research a culture or situation from within. There is a difference between the researcher as simply an onlooker and one who is actually participating while observing (i.e., doing what the people are doing). The observer usually spends an extended period of time within the setting to be studied and records ‘fieldnotes’ 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 behaviours. 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. However, if a researcher is expecting to commit to a particular topic as part of an ongoing program of research the investment of this time can prove very valuable. The researcher should allow enough time to get at the complexity of the situation being observed.

2. Interviews

- An interview implies some form of verbal discourse. The participant provides the researcher with information through verbal interchange or conversation. Non-verbal behaviours 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. However, the method of data collection remains an interview.
- 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. Frequently, the interview protocol provides

opportunities for the interviewer to probe following participant responses to open-ended questions.

- 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 participants' responses, and this should be taken into account by the researcher.

3. Document Review

- Document review is often used in historical research, which 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. Documents are reviewed considering the context within which they were created. The historian learns about particular persons at particular times and places that present unique opportunities to learn about the topic of interest.
- It is a research method that requires the researcher to enter into an in-depth learning process, to become a critical editor of texts, such as diaries, media reports, or blogs. The researcher should explain the method used and readers should feel comfortable that the method involved adequate depth and a critical approach.

4. 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. Group members can build on one another's ideas to result in more in-depth discussions of the topic. 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 among group members.
- The disadvantages of focus groups relate to the potential constraints that a group setting can place on individuals' responses. A common challenge in focus groups is to ensure that both reticent and gregarious participants have an opportunity to be heard. The facilitator of the focus group must be skilled in group process and interviewing techniques to ensure the success of the group.

5. Other

- Other forms of qualitative research methods include mapping cultural settings and events; recording, using either audio or visual techniques such as photography; 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. However, these tend to be limited, and often constrain the participants in ways that other qualitative methods do not. Answering one open-ended question at the end of a survey is not the same as participating in an in-depth interview. It is difficult to ensure that the richness of participants' experiences is really conveyed.

Researchers need to be clear about the intent of such questions, and how the results are analysed and interpreted.

Sampling

- The process of purposeful selection was described? - Sampling in qualitative research is purposeful and the process used to select participants should be clearly described.
- The sampling method needs to fit the study purpose or research question being explored.
- 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.
- Sampling was done until 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.
- The sample should be described in such a way that the reader understands the key characteristics of the participants involved. As a reader, you should then be able to consider the sample in comparison to the purpose of your critical review. You may decide at this point that the sample is different enough from your own population of interest that further appraisal of the study is not warranted.
- Informed consent was obtained? - The authors should describe ethics procedures, including review by a research ethics board and describing how informed consent was obtained and recorded.

Data Collection

Descriptive Clarity

- Clear and complete descriptions? - In qualitative research, the reader should have a sense of personally experiencing the event/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, and the site or setting.
- 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, so it is clear what contribution each participant made to the data gathering, analysis, and interpretation of the findings.

- It is often useful to consider what information is missing. This sheds light on how the research can be understood.
- Role of the researcher and relationship with participants: 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.
- Identification of assumptions and biases of researcher: The researcher should declare his/her assumptions and biases about the topic under study to make the researcher’s views about the phenomenon explicit.
- A vivid but concise 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.

■ Procedural Rigour

- Procedural rigour was used in data collection strategies? The researcher should clearly describe the procedures used to ensure that the reader can understand the tasks undertaken to collect the data. All source(s) of information used by the researcher should be described.
- 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 Analyses

■ Analytical Rigour

- Data analyses were inductive? - The researcher(s) should describe how the findings emerged from 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 judgement as to whether the methods are appropriate given the purpose of the study.
- Qualitative analyses are typically inductive i.e., starting with data and organizing them into “chunks” which are typically referred to as codes, categories and themes.
- You should be able to summarize the major findings of the analyses in this section.
- Findings were consistent with and reflective of data? The codes, categories and/or themes 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 codes, categories, and themes.

■ Auditability

- Decision trail developed? - The process used to identify codes, categories, 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 codes, themes etc. Researchers often confront space limitations in publishing their research, so frequently state that they used a decision trail, but may not provide all of the details. You will need to judge whether you have adequate information about the analyses, and the rationale used to describe the interpretation of the data.

- Process of analyzing the data was described adequately? - The researchers should report on how data was transformed into codes and 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, 1999). The methods used should be described.
- 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

- Did a meaningful picture of the phenomenon under study emerge? The findings or discussion section 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.

Overall Rigour

- Rigour in qualitative studies is critical. While in quantitative research one discusses concepts such as reliability and validity, qualitative researchers argue for the use of different terminology when determining the rigour of a qualitative study (Guba & Lincoln, 1989; Krefting, 1991; Taylor, 2000). The overarching concept when considering rigour is trustworthiness.
- Was there evidence of the four components of trustworthiness? Trustworthiness ensures the quality of the findings and increases the reader's confidence in the findings. This requires that there be logical connections among the various steps in the research process from the purpose of the study through to the analyses and interpretation.
- The four components of trustworthiness are:
 - Credibility which is related to the "true" picture of the phenomenon. Are descriptions and interpretations of the participants' experiences recognizable? Ways of ensuring credibility might include:
 - collection of data over a prolonged period and from a range of participants;
 - use of a variety of methods to gather data;
 - use of reflective approach through keeping a journal of reflections, biases or preconceptions and ideas;
 - triangulation, a strategy used to enhance trustworthiness through the use of multiple sources and perspectives to reduce systematic bias. Main types of triangulation are by sources (people, resources); by methods (interviews, observation, focus groups); by researchers (team of researchers versus single

- researcher) or by theories (team may bring different perspectives to research question for example a rehabilitation therapist and a sociologist); and
- the involvement of participants through member checking. Member checking may consist of the involvement of participants in a range of activities to verify data and interpretation such as returning transcriptions to participants for review of accuracy of the interview content or returning to participants at various stages during collection and analysis of data to ensure that the researcher reflects or presents the experience of the phenomenon as it is understood by the participants.
- Transferability which is related to whether the findings can be transferred to other situations. Has the researcher described participants and the setting in enough detail to allow for comparisons with your population of interest? Are there concepts developed that might apply to your clients and their contexts? Transferability is ensured through adequate descriptions of sample and setting.
 - Dependability which relates to the consistency between the data and the findings. There should be a clear explanation of the process of research including methods of data collection, analyses and interpretation often indicated by evidence of an audit trail or peer review. The audit trail describes the decision points made throughout the research process.
 - Confirmability which involves the strategies used to limit bias in the research, specifically the neutrality of the data not the researcher. This can be enhanced through the researcher being reflective and keeping a journal, peer review such as asking a colleague to audit the decision points throughout the process and checking with expert colleagues about ideas and interpretation of data, checking with participants about ideas and interpretation of data, and having a team of researchers.

Conclusions & Implications

- Conclusions were 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.
- The findings contributed to theory development and future OT practice? - 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 facing occupational therapists. The authors should relate the findings back to the existing literature and theoretical knowledge in occupational therapy. Implications and recommendations should be explicitly linked to occupational therapy practice situations and research directions.

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