Standards for Qualitative Research

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Standards for Qualitative Research

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One of the greatest obstacles to the identification of excellence in qualitative studies is the lack of generally accepted criteria. The criteria developed for quantitative studies are based on a different set of assumptions and are not appropriate. Those who critique qualitative studies need context flexibility, skills in inductive reasoning, skills in theory analysis, and the capacity to transform ideas across levels of abstraction. The following standards are proposed for critique of qualitative studies: (a) descriptive vividness; (b) methodological congruence; (c) analytic preciseness; (d) theoretical connectedness; and (e) heuristic relevance. Methodological congruence has four elements: rigor in documentation; procedural rigor; ethical rigor; and auditability. Heuristic relevance has three elements: intuitive recognition; relationship to existing body of knowledge; and applicability. Threats to each of these standards are identified. Creative strategies for improving the published presentation of qualitative studies must be developed to allow adequate critique.

Qualitative studies are appearing with increasing frequency in nursing research literature. Many nurse researchers, some uncertain of their opinion about qualitative research and having minimal knowledge about this particular approach, are faced with the necessity of making critical judgments. These judgments relate to: the critique and selection of these studies for publication; presentation in meetings; acceptability for graduate study; and approval for funding. Some feel that this responsibility is best left to those who "do" qualitative research themselves. However, this is not likely to be a viable solution. First, the small numbers of qualitative researchers in nursing would make this difficult. Second, those who must perform critiques because of their position as editor, or dissertation chairperson, despite a lack of experience in conducting qualitative studies, must, by virtue of their position, conduct the critique. Third, if qualitative research findings are to be useful to the overall body of knowledge in nursing, skills in their critique must become more widespread.

This paper will define qualitative research, discuss the skills needed to critique qualitative research, identify the elements which should be present in a well-written report of a qualitative study, propose standards for use in the critique of qualitative studies and threats to those standards, and recommend strategies for improving the reporting of qualitative studies.

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What is Qualitative Research?

Authors use the term "qualitative research" in a variety of ways. It is used by some to mean any research which is not quasi experimental or experimental, through which numerical data are obtained (Bigbee, 1986). Others tend to combine quantitative descriptive research with such approaches as phenomenological, grounded-theory, and ethnographic and label them all qualitative (Knafl & Howard, 1984). This paper will use the more typical definition of qualitative research; studies in which (a) an alternative to the positivist paradigm is used as the basis for the study, (b) words are considered the elements of data, (c) a primarily inductive approach to data analysis is used, and (d) theory development is the outcome of data analysis (Burns & Grove, 1987; Cobb & Hagemaster, 1987; Kirk & Miller, 1986; Parse, Coyne, & Smith, 1985).

Research Assumptions

One of the greatest obstacles to the identification of excellence in qualitative studies is the effort to evaluate qualitative studies using quantitative criteria. The most familiar form in which these quantitative criteria are presented is the validity and reliability criteria presented by Campbell and Stanley (1966) and later modified by Cook and Campbell (1979). These criteria were developed using assumptions which are very appropriate for the cri-

tique of quantitative studies but are inappropriate for the evaluation of qualitative studies. Morgan (1983) states that:

> no single set of scientific standards can claim monopoly over decisions as to what counts as valid knowledge. In everyday life we would not normally dream of applying criteria for judging the quality of a cream cake in the assessment of a slice of roast beef. One wonders, therefore, why we engage in this kind of activity in social science. Different research strategies, though seeking to contribute to a formal body of knowledge described as "scientific," may be qualitatively different in nature and intent and call for different criteria for considering the worth of their claims. (p. 393)

The assumptions on which the criteria of validity and reliability were established for quantitative research include: (a) the data were collected cross-sectionally rather than across time; (b) the logic of the study followed primarily deductive lines of reasoning; (c) the data were in numerical form; (d) the data were context free; (e) analysis was conducted using statistical procedures; (f) the subjects are representative of a larger group of individuals to which the findings can be generalized; (g) generalizability is an important indicator of the value of the findings; (h) a single, rational reality exists which can be observed, measured, and explained, and it remains the same and can be measured consistently across time; and (i) the most important things to understand scientifically about reality are the causes and effects of events.

Criteria to evaluate qualitative research, on the other hand, must be based on very different assumptions. The assumptions of the qualitative orientation are that: (a) data were gathered across time; (b) the study was conducted using primarily inductive reasoning; (c) data were presented in the form of words; (d) all data are context specific; (e) data analysis involves multiple transformations from raw data to theoretical statements; (f) generalizations occur abstractly through theoretical statements; (g) the value of a study is related to relevance for theory enhancement; (h) there are multiple layers of reality; (i) reality changes across time; and (j) the most important things to understand about events are the meanings which are attached to them.

Skills Needed to Critique Qualitative Studies

The individual who would critique qualitative studies needs some skills not required for the critique of quantitative studies. These include: (a) context flexibility; (b) skills in inductive reasoning; (c) skills in conceptualization, theoretical modeling, and theory analysis; and (d) the ability to transform ideas across levels of abstraction.

Context flexibility

Context flexibility is the capacity to switch from one context or world view to another, to shift perception in order to "see" things from a different perspective. Each world view is based on a set of assumptions through which reality is defined. Developing skills in the critique of qualitative studies requires that the individual be willing to move from the assumptions of quantitative research to those on which qualitative research is based.

This skill is nothing new in nursing. It has been required since Nursing 101. One of the first things one is required to do as a nursing student is to "see" things from the point of view of the client, even if there is strong disagreement with the perspective. Accomplishing this required an investment of time and energy to learn more about the client and set aside personal, sometimes strongly held, views. Often, learners are reluctant to set aside their own views, for fear they will lose them, and in the process lose part of their own identity. Only when they gain confidence in the strength and intactness of their personal views can they temporarily let go of them.

It is not necessary for one to become committed to a perspective in order to follow and/or apply its logical structure. In fact, all scholarly work requires a willingness and ability to examine and evaluate works from diverse perspectives. For example, analysis of the internal structure of a theory requires this same process.

Inductive reasoning

Although all research requires skills in both deductive and inductive reasoning, the transformation process used during data analysis in qualitative research is based on inductive reasoning. The individual conducting a critique of a qualitative study must be able to exercise skills in inductive reasoning in order to follow the logic of the researcher. This logic is revealed through language in the systematic move from concrete descriptions to the level of science.

Conceptualization, theoretical modeling, and theory analysis

Qualitative research is oriented toward theory construction. Therefore, an effective reviewer of qualitative research must have skills in conceptualization, theoretical modeling, and theory analysis. The theoretical structure in a qualitative study is developed inductively and is expected to emerge from the data. The reviewer must be able to follow the logical flow of thought of the researcher and be able to analyze and evaluate the adequacy of the resultant theoretical schema as well as its connection to theory development within the discipline.

Transforming ideas across levels of abstraction

Closely associated with the necessity of having skills in theory analysis is the ability to follow the transformation of ideas across several levels of abstraction and to judge the adequacy of the transformation. Whenever one conducts a literature review, organizes ideas from the review, and then again modifies those ideas in the process of developing a paper, a study, or a summary of the existing body of knowledge, one is involved in the transformation of ideas. Those who teach graduate students have had experiences in evaluating the adequacy of this transformation process while grading term papers.

Elements of a Qualitative Research Report

Burns and Grove (1987) proposed five steps to a research critique: (a) comprehending the report; (b) comparing the elements of the report to an ideal version (or standard) of how that element of the report should have been done (or reported); (c) judging the adequacy of the logic within the study; (d) evaluating the usefulness of the study for clinical practice; and (e) cognitive clustering, a process of combining the findings of the present study with previous scientific knowledge in order to evaluate the adequacy of the existing body of nursing knowledge related to that area of research. These steps were developed in relation to critiquing quantitative studies. However, the steps are the same for qualitative research.

Although standards for the written presentation of qualitative studies have not been developed, a review of the literature does indicate that guidelines for a written presentation being explored. From the literature review, a picture of the content and quality of an ideal written qualitative study begins to emerge. The following section will identify the elements expected to be included in the written report of a qualitative study and the expected standards.

Statement of the phenomenon

The phenomenon should identify the boundaries which will be used to govern decisions related to data gathering. (Guba & Lincoln, 1982). It should be explicitly stated and related to health and should be rooted in nursing knowledge (Parse et al., 1985).

Purpose

The purpose of the study should be clearly expressed and should clarify the expected outcome of the study.

Research questions

Research questions should be explicitly expressed and should flow from the phenomenon. (Parse et al., 1985).

Significance of the topic

The researcher must clarify for the reader the significance of the topic selected for research. This significance should be documented from the literature whenever possible.

Identification of assumptions

The researcher should identify assumptions, preconceptions, and presuppositions early in the report (Knaack, 1984). A researcher's perspective should be set forth to make explicit the researcher's view about the phenomenon (Parse et al., 1985).

Identification of metatheories

No matter how unstructured researchers attempt to be, their thinking is influenced by the metatheory of their discipline. Choice of terminology, foci, methods of analysis, and articulation of findings are influenced by the metatheory. The researcher knows something conceptually about the phenomenon and knows where to look for the phenomenon, or the study would not have been planned. Therefore, the written report should identify the metatheory and clarify its influence on the study (LeCompte & Goetz, 1982; Miles & Huberman, 1984). The metatheory, in a sense, provides the theoretical perspective for the study.

Researcher credentials

Documentation of the researcher's credentials and expertise in conducting a study using the identified metatheory and accompanying methodology should be provided (Cobb & Hagemaster, 1987). Many believe that, to become an effective qualitative researcher, one must serve an apprenticeship or seek mentoring from one experienced in the specific type of qualitative research before one is qualified to conduct that type of study. This is because many of the techniques of the methodology are better communicated one-to-one rather than in texts. Because the researcher serves as the primary data-gathering instrument and the analysis of data occurs primarily within the reasoning processes of the researcher, a high level of intellectual discipline is required. Otherwise the data gathering and analysis may be shallow and sloppily done. Therefore, documentation of credentials is valuable in judging the worth of the study.

The context

The social dimensions of the situation under study should be described (LeCompte & Goetz, 1982; Glaser & Strauss, 1965; Vidich, 1955). The subjects' descriptions include a contextual situation which is important to uncovering the meaning of an experience.

Role of the researcher

If the researcher serves as a participant-observer, the social role of the researcher and the images the respondents have of him or her will influence the nature of the data gathered and these should be described. It is important to explore the possibilities that interaction between the observer and the informant or between the observer, the informant, and others present during the interaction influenced the behavior of the subjects (Becker, 1958). Knaack (1984) suggests that the researcher discuss the effectiveness of the use of bracketing. An indicator of effectiveness in bracketing is shown through the link between the findings and the subjects' descriptions.

Ethics

Ethics related to the rights of human subjects and the ethical implications of the data collection procedure should be explored in the paper. This should include a discussion of how the subjects' rights were protected and how informed consent was obtained (Parse et al., 1985). Deceptive research strategies, of course, are considered unethical.

Sampling and subjects

The type of sampling procedure and choices of informants should be described. The credibility of informants should be explored (Becker, 1958). The adequacy of the sample with respect to a particular research method should be discussed (Parse et al., 1985).

Data gathering strategy

The data-gathering process should be clearly described and its appropriateness for a particular method should be discussed. The purpose of the method should be made clear (Parse et al., 1985). The researcher should describe the process of gaining access to the site, gaining access to subjects, method of gathering data, training data collectors, the length of time spent gathering data, and the amount of data gathered (Knafl & Howard, 1984). Becker (1958) recommends that the researcher clarify whether specific statements by subjects were volunteered or researcher directed.

Data analysis strategies

Initially, data are in the form of notes, tapes, or other material from observations or interviews. These notes are synthesized into categories or common elements by the researcher after the researcher dwells with the data. From this point, the researcher moves to a more general explanatory level of synthesizing in order to transform the data to a more abstract level. Miles and Huberman (1984) refer to this as pattern coding. Pattern codes are inferential and identify an emergent theme, pattern, or explanation that the data suggest to the analyst. The researcher uses pattern codes to pull large volumes of material together into meaningful and parsimonious units, thus grouping the data into a number of overarching themes or constructs.

It is important that the reasoning process through which the analysis occurs be clearly described (Knaack, 1984; Miles & Huberman, 1984; Parse et al., 1985). Guba and Lincoln (1982) suggest that the researcher identify the categories or common elements used and the rules used to place data into the categories. It is the categories that provide a picture of the phenomenon. Therefore, the completeness of the categories or common elements in representing the phenomenon should be examined. Decision rules, used to transform to higher levels of abstraction, should be made explicit in the paper (Becker, 1958; Miles & Huberman, 1984). These rules should be applied systematically and consistently (Guba & Lincoln, 1982). The researcher must provide evidence of the extent to which samples are representative (or typical) of the phenomenon being described (Denzen, 1978; LeCompte & Goetz, 1982).

Working hypotheses are developed from the emerging theoretical schema. These hypotheses are tested as the researcher returns to the original data to identify its presence in the descriptions from subjects. The working hypotheses and changes in the theoretical schema which result should be described in the paper. One important source is the participant-subject. Thus, the researcher should report the reaction of the subjects to the conclusions of the study if this is appropriate in the particular qualitative method.

The data should be displayed in a manner which allows the reader to get an overall picture of the process of organizing the data and to verify the researcher's theoretical conclusions (Miles & Huberman, 1984). In addition, the resulting theoretical schema should be formalized through the presentation of a conceptual map or framework (Artinian, 1982; Miles & Huberman, 1984).

Conclusions, implications, suggestions for further study

Conclusions should summarize the findings of the study. It is important that the concluding statements share all aspects of the find-

ings. The author should discuss what the study accomplished and what was not accomplished. A substantive answer should be given for each research question. As in any study, implications of the findings for nursing practice and theory development should be explored and suggestions made for further research. The researcher should acknowledge limitations to both conclusions and implications (Phillips, 1986).

Literature review

Literature related to the phenomenon under study should be discussed at some point in the paper. Its location and the point in the study when it was conducted will vary with the particular qualitative method. The findings of the study should be explored in relation to the existing body of knowledge. It is from this examination that implications for practice and suggestions for further research and theory development should be made.

Standards for Critique

Five standards have been proposed by which qualitative studies can be evaluated: Standard I, descriptive vividness; Standard II, methodological congruence; Standard III, analytic preciseness; Standard IV, theoretical connectedness; and Standard V, heuristic relevance. Methodological congruence has four elements: rigor in documentation; procedural rigor; ethical rigor; and auditability. Heuristic relevance has three elements: intuitive recognition; relationship to existing body of knowledge; and applicability.

Multiple problems can occur in qualitative studies, as they can in quantitative studies. However, the specific problems are likely to be different. Reviewers who have a quantitative orientation have a double disadvantage. First, they must know which problems are likely to occur and, second, they must be able to determine the probability that the problem may have occurred in the particular study being critiqued. As suggested by Burns and Grove (1987), the critique should provide a balanced evaluation of both the strengths and the limitations of a study. The following section will describe the standards and identify threats to those standards for qualitative research.

Standard I: Descriptive Vividness

The description of the site, the subjects, the experience of collecting the data, and the thinking of the researcher during the process needs to be presented so clearly that the reader has the sense of personally experiencing the event. Glaser and Strauss (1965) say that the researcher should "describe the social world studied so vividly that the reader can almost literally see and hear its people" (p. 9). Since one of the assumptions of qualitative research is that all data are context specific, the evaluator of a study must understand the context of that study. From this description, the reader must get a sense of the data as a whole as they are gathered and the reactions of the researcher during the data gathering and analysis processes. A contextual understanding of the whole is essential and prerequisite to the capability of the reviewer to evaluate the study in light of the other four standards.

Threats to descriptive vividness

1. Failure to include essential descriptive information.
2. Lack of clarity in description.
3. Lack of credibility of description.
4. Inadequate length of time at site to gain familiarity necessary for vivid description.
5. Insufficient depth to description.
6. Insufficient skills in writing descriptive narrative.
7. Reluctance to reveal self in written material.
8. Inadequate self-awareness.
9. Poor observational skills.

Standard II: Methodological Congruence

Evaluation of methodological congruence requires that the reviewer have knowledge of the metatheory and the particular methodological approach which was used by the researcher. It is the responsibility of the author to identify the metatheory and the methodological approach and cite sources through which the reviewer can obtain further information if needed. Methodological excellence has four dimensions: rigor in documentation; procedural rigor; ethical rigor; and auditability.

Rigor in documentation

Rigor in documentation requires the presentation, by the author, of all the elements of the study: phenomenon; purpose; research question; justification of the significance of the phenomenon; identification of assumptions; identification of metatheories; researcher credentials; the context; role of the researcher; ethical implications; sampling and subjects; data-gathering strategies; data analysis strategies; theoretical development; conclusions; implications and suggestions for further study and practice; and a literature review.

Threats to rigor in documentation

1. Failure to present elements of study.
2. Failure of presentation of elements to meet standards.

3. Inadequate clarity in presentation of elements.

Procedural rigor

Another dimension of methodological congruence is the rigor of the researcher in applying the selected procedures for the study. To the extent possible, the researcher should make clear the steps taken to ensure that data were accurately recorded and that the data obtained are representative of the data as a whole.

Threats to procedural rigor

1. Researcher may have asked the wrong questions. The questions must tap the subjects' experiences, not their theoretical knowledge of the subject.
2. Questions used terminology from the theoretical orientation of the researcher (Kirk & Miller, 1986; Knaack, 1984).
3. Informant lied to the researcher. This can occur for several reasons. The informant may have an ulterior motive. There may be others present who inhibit free expression by the informant. He or she may wish to impress the researcher by giving the response which seems the most desirable (Dean & Whyte, 1958).
4. Informant did not observe the details requested or was not able to recall the event and substitutes instead what he or she supposed happened (Dean & Whyte, 1958).
5. Researcher places more weight on data obtained from well informed, articulate, and/or high status individuals (an "elite bias") and underrepresents data from those who are less articulate, obstinate, and/or low status (Miles & Huberman, 1984).
6. Presence of the researcher distorts the event being observed (LeCompte & Goetz, 1982).
7. Researcher's involvement with the subject-participants distorts the data.
8. Biases are present on part of researcher and/or participants.
9. Atypical events are interpreted as typical.
10. Data are distorted due to inaccurate assumption of equivalence of situations (Vidich, 1955).
11. Informants lack credibility (Becker, 1958).
12. Data-gathering process is inappropriate for particular research method.
13. Insufficient amount of data is gathered.
14. Insufficient length of time is spent in data gathering.
15. Training of data collectors is insufficient.
16. Approach to gaining access to the site is inappropriate.
17. Approach to gaining access to subjects is inappropriate.
18. Use of bracketing is ineffective.
19. Imputation of motives of subjects is incorrect (Vidich, 1955).
20. Selection of subjects is inappropriate.

Ethical rigor

Ethical rigor requires recognition and discussion by the researcher of the ethical implications of various factors related to the conduct of the study. Consent is obtained from subjects and documented. The report must indicate that the researcher took action to ensure that the rights of subjects were protected during the study.

Threats to ethical rigor

1. Researcher failed to obtain consent from subjects.
2. Researcher failed to ensure rights of subjects.
3. Researcher failed to inform subjects of rights.

Auditability

A fourth dimension of methodological congruence is the rigorous development of a decision trail (Miles & Huberman, 1984). Guba and Lincoln (1982) refer to this dimension as auditability. To achieve this, the researcher must report all of the decisions involved in the transformation of data to the theoretical schema. This reporting should be in sufficient detail to allow a second researcher, using the original data and the decision trail, to arrive at conclusions similar to those of the original researcher.

Threats to auditability

1. Description of data-gathering process is inadequate.
2. Records of raw data were not sufficient to make judgment.
3. Rationale for development of categories or themes is not provided.
4. Researcher failed to develop and/or identify decision rules for arriving at ratings or judgments.
5. Other researchers are unable to arrive at similar conclusions after applying decision rules to data.
6. Researcher failed to record the nature of decisions, data upon which they were based, and reasoning that entered into decisions.
7. Evidence for conclusions is not presented (Becker, 1958).
8. Theoretical statements are not linked to data.

Standard III: Analytical Preciseness

As mentioned previously, the analytic process in qualitative research involves a series of

transformations during which concrete data are transformed across several levels of abstractions. The outcome of the analysis is a theoretical schema which imparts meaning to the phenomena under study. The analytic process occurs primarily within the reasoning of the researcher and has tended not to be well reported in published reports. Some of the transformations may occur intuitively or during sleep. This also has been reported in interpreting the results of quantitative research and has long been recognized as an essential element of science (Campbell, 1979; Poincare, 1913). However, analytic preciseness requires that the researcher make intense efforts to identify and to record the decision-making processes through which transformations were made. The processes by which the theoretical schema are cross-checked with data must also be reported in detail.

Premature patterning may occur before the researcher can logically fit all of the data within the emerging schema. Nisbett and Ross (1980) have shown that patterning happens very rapidly and is the way individuals habitually process information. The consequence may be a poor fit between data and theoretical schema (LeCompte & Goetz, 1982; Miles & Huberman, 1984, Sandelowski, 1986). In its extreme, the relationships proposed among the phenomena may be spurious. Campbell (1979) states: "The theoretical mind is capable of remarkably flexible post hoc rationalization of any outcome, and in such rationalization, overinterpretation, capitalization on chance, and exhaustion of degrees of freedom do often occur" (pp. 59–60).

> The risk, of course, is building order and purpose into events that are more loose ended, random, inconclusive, and perverse than causal networks would have them. In any event, causal analysis is an epistemological leap of faith (Miles & Huberman, 1984, p. 141).

Miles and Huberman (1984) suggest that plausibility is the opiate of the intellectual. If the emerging schema makes good sense and fits with other theorists' explanations of the phenomena, the researcher locks into it. This is why it is so critical to test the schema by rechecking the fit between the schema and the original data.

Threats to analytical preciseness

1. Interpretative statements do not correspond with findings (Parse et al., 1985).
2. Categories, themes, or common elements are not logical.
3. Samples are not representative of the class of joint acts referred to by the researcher (Denzen, 1978).
4. Prioritizing processes are not logical.
5. Categories or common elements are not consistent.
6. Set of categories, themes, or common elements fail to set forth a whole picture.
7. Set of categories, themes, or common elements are not inclusive of data that exist.
8. Data are inappropriately assigned to categories, themes, or common elements.
9. Inclusion and exclusion criteria for categories, themes, or common elements are not consistently followed.
10. Working hypotheses or propositions cannot be verified by data.
11. Working hypotheses or propositions are not presented.
12. Pattern codes are not provided.
13. There is evidence of premature analytical closure.
14. Conclusions are not databased.
15. Various sources of evidence fail to provide convergence.
16. There is incongruence of evidence.
17. Subject-participants fail to validate findings when appropriate.
18. Proposed relationships among observed phenomena are spurious (LeCompte & Goetz, 1982).
19. Conclusions do not contain all of the data well.
20. Data are made to appear more patterned or regular or congruent than they are (Sandelowski, 1986).

Standard IV: Theoretical Connectedness

Theoretical connectedness requires that the theoretical schema developed from the study be clearly expressed, logically consistent, reflective of the data, and compatible with the knowledge base of nursing.

Threats to theoretical connectedness

1. Findings are trivialized (Goetz & LeCompte, 1981).
2. There is inadequate clarification of concepts.
3. There is inadequate refinement of concepts.
4. Concepts are not validated by data.
5. The set of concepts lack commonality.
6. Relationships between concepts are not clearly expressed.
7. Theoretical statements are not internally consistent.
8. Proposed relationships between concepts are not validated by data.
9. Themes fail to give accurate expression of original values (Bruyn, 1966).
10. There is inadequate integration of relationships among meanings brought together by the theoretical schema (Bruyn, 1966).
11. Working propositions are not validated by data.
12. There is distortion of data in development of theoretical schema (Bruyn, 1966).

13. The theoretical schema fails to yield a meaningful picture of phenomena under study.
14. A conceptual framework or map is not derived from the data.
15. There is no clear connection made between the data and existing nursing frameworks.

Standard V: Heuristic Relevance

The results of a study must have heuristic relevance for the readers to be of value. This value is reflected in the reader's capacity to recognize the phenomenon described in the study, its theoretical significance, its applicability to nursing practice situations, and its influence in future research activities. There are three dimensions of heuristic relevance: intuitive recognition; relationship to existing body of knowledge; and applicability.

Intuitive recognition

Intuitive recognition indicates that when individuals are confronted with the theoretical schema derived from the data, it has meaning within their personal knowledge base. They immediately recognize the phenomenon being described by the researcher and its relationship to a theoretical perspective in nursing.

Threats to intuitive recognition

1. The phenomenon is poorly described.
2. The reader lacks familiarity with the phenomenon.
3. Description is not consistent with common meanings.
4. Theoretical connectedness is lacking.
5. Analytical preciseness is lacking.

Relationship to existing body of knowledge

The existing body of knowledge, particularly the nursing theoretical perspective from which the phenomenon was approached, must be reviewed by the researcher and compared to the findings of the study. There should be intersubjectivity with existing theoretical knowledge in nursing and previous research. Reasons for differences with the existing body of knowledge should be explored by the researcher.

Threats to relationship to existing body of knowledge

1. The researcher fails to examine the existing body of knowledge.
2. The process studied was not related to nursing and health.
3. The researcher fails to identify existing relationships.
4. There is lack of correspondence with existing knowledge base in nursing (Parse et al., 1985).

Applicability

The findings should be applicable to nursing practice situations through integration into the knowledge base of the nurse. They should also contribute to theory development within the discipline and guide future development of studies.

Threats to applicability

1. Findings are not relevant to nursing practice.
2. Findings are not significant for the discipline.
3. There is a failure to achieve methodological congruence.
4. There is a failure to achieve analytical preciseness.
5. There is a failure to achieve theoretical connectedness.

Improving the Reporting of Qualitative Research

Qualitative researchers, faced with a known high risk of rejection of submitted papers, are also limited by the lack of a standardized way to prepare a written presentation of their work. Research journals severely limit the length of a paper acceptable for publication. This limitation is necessary because of the high cost of space in a journal with a limited circulation. Quantitative studies are prepared using a very stylized form of writing in which a type of "shorthand" is used to communicate to the reader the research strategies used in the study (LeCompte & Goetz, 1982). Some researchers use the alternative of publishing the study in book format or in a monograph. However, bringing qualitative research into the mainstream of nursing thought requires increased publication of qualitative studies in the established nursing journals.

Strategies for ensuring excellence in the style of presentation of the study must be explored. Efforts to include all of the elements suggested in this paper may be difficult if not impossible within the present page limitations of most journals. Therefore, alternative approaches to making the information available for critique must be considered.,

One strategy would be to prepare a supplement to the published paper which was available upon request. The published report could include information about the supplement and an address for requesting the supplement. The supplement could be submitted with the paper for blind review by the journal to allow a more thorough review before the paper was accepted for publication. A statement that the supple-

ment was submitted for blind review could be included in the publication.

A critique of the study (including the supplement) could follow the paper in the journal publication. If a second researcher has attempted to follow the decision trail of the first researcher, this should be documented in the paper. This individual might be the ideal person to write a critique of the paper to follow the published presentation.

Creative efforts to find effective ways to provide the information needed for critique must be explored by those involved in qualitative research. This is a necessary prerequisite to more general acceptance by the discipline of this approach to research.

References

Artinian, B. M. (1982). Conceptual mapping: Development of the strategy. *Western Journal of Nursing Research, 4*, 379–393.

Becker, H. S. (1958). Problems of inference and proof in participant observation. *American Sociological Review, 23*, 652–660.

Bigbee, J. L. (1986). Beyond chi-square: Log-linear analysis and related methods of qualitative analysis. *Advances in Nursing Science, 8*, 70–79.

Bruyn, S. T. (1966). *The human perspective in sociology*, Englewood Cliffs, NJ: Prentice-Hall.

Burns, N., & Grove, S. (1987). *The practice of nursing research: Conduct, critique, utilization*, Philadelphia: Saunders.

Campbell, D. T. (1979). "Degrees of freedom" and the case study. In T. D. Cook & C. S. Reichart (Eds.), *Qualitative and quantitative methods in evaluation research* (pp. 49–67). Beverly Hills, CA: Sage.

Campbell, D. T., & Stanley, J. C. (1966). *Experimental and quasi-experimental designs for research*. Chicago: Rand McNally.

Cobb, A. K., & Hagemaster, J. N. (1987). Ten criteria for evaluating qualitative research proposals. *Journal of Nursing Education, 26*, 138–143.

Cook, T. D., & Campbell, D. T. (1979). *Quasi-experimentation: design and analysis issues for field settings*. Chicago: Rand McNally.

Dean, J. P., & Whyte, W. F. (1958). How do you know if the informant is telling the truth? *Human Organization, 17*, 34–38.

Denzen, N. K. (1978). *The research act*. Chicago: Aldine.

Glaser, B., & Strauss, A. L. (1965). Discovery of substantive theory: A basic strategy underlying qualitative research. *American Behavioral Scientist, 8*, 5–12.

Goetz, J. P., & LeCompte, M. D. (1981). Ethnographic research and the problem of data reduction. *Anthropology and Education Quarterly, 12*, 51–70.

Guba, E. G., & Lincoln, Y. S. (1982). *Effective evaluation*, Washington DC: Jossey-Bass.

Kirk, J., & Miller, M. L. (1986). *Reliability and validity in qualitative research*. Beverly Hills, CA: Sage.

Knaack, P. (1984). Phenomenological research. *Western Journal of Nursing Research, 6*, 107–114.

Knafl, K. A., & Howard, M. J. (1984). Interpreting and reporting qualitative research. *Research in Nursing and Health, 7*, 17–24.

LeCompte, M. D., & Goetz, J. P. (1982). Problems of reliability and validity in ethnographic research. *Review of Educational Research, 52*, 31–60.

Miles, M. B., & Huberman, A. M. (1984). *Qualitative data analysis: A source book of new methods*. Beverly Hills, CA: Sage.

Morgan, G. (1983). Exploring choice: reframing the process of evaluation. In G. Morgan (Ed.), *Beyond method: Strategies for social science* (pp. 392–404). Beverly Hills, CA: Sage.

Nisbett, R., & Ross, L. (1980). *Human inference: Strategies and shortcomings of social judgment*. Englewood Cliffs, NJ: Prentice-Hall.

Parse, R. R., Coyne, A. B., & Smith, M. J. (1985). *Nursing research: Qualitative methods*. Bowie, MD: Brady.

Phillips, L. R. F. (1986). *A clinician's guide to the critique and utilization of nursing research*. Norwalk, CT: Appleton-Century-Crofts.

Poincare, H. (1913). Mathematical creation. In H. Poincare (Ed.), *The foundations of science* (pp. 383–394). New York: Science Press.

Sandelowski, M. (1986). The problem of rigor in qualitative research. *Advances in Nursing Research, 8*, 27–37.

Vidich, A. J. (1955). Participant observation and the collection and interpretation of data. *The American Journal of Sociology, 60*, 354–360.