Interpreting and Reporting Qualitative Research

Kathleen Astin Knafl and Marion J. Howard

The aims of this paper were to clarify the nature and purpose of qualitative research and to suggest specific guidelines for reporting the results of qualitative studies. Confusion about the purpose of qualitative research and the absence of a standardized format for reporting such research make it difficult to assess the validity of qualitative studies. Four general purposes of qualitative research were discussed: instrument development, illustration of results, description, and conceptualization. A framework for reporting qualitative research that provides a guide for assuring consistency across original study purpose, study design, and final report was presented and can be used for either evaluating or writing a report of qualitative research.

The reporting of study results confronts the qualitative researcher with a difficult problem. Unlike the person who has undertaken an experimental or survey study, the qualitative researcher has no well-codified, generally accepted, protocol available as to how the methodology and findings of such a study best can be communicated. Focusing on techniques and problems of data collection, processing, and analysis, qualitative methods texts and articles give the researcher comparatively few guidelines for communicating data in a way that convinces the reader of their validity and reliability. As a result, reports of qualitative studies follow varying formats (Glaser & Strauss, 1966; Klenow, 1981), many of which may appear highly unorthodox and unacceptable to the reader who is accustomed to reading the results of surveys and experiments. Using the latter as a standard for evaluation, readers often find reports of qualitative research interesting but unconvincing.

The present article is predicated on the following two assumptions: (a) the absence of a standard format for reporting qualitative research makes it difficult for even the methodologically sophisticated reader to assess the validity of a qualitative study, and (b) difficulties in understanding and evaluating qualitative research stem from confusion over the underlying nature and purposes of qualitative research. Building on these assumptions, the aims of this article are to clarify the nature and purposes of qualitative research and to suggest specific guidelines for reporting the results of qualitative studies.

NATURE AND PURPOSE OF QUALITATIVE RESEARCH

In this section the desired products of qualitative nursing research and the means for attaining these are discussed. Qualitative research typically has been defined in terms of research methods. Comparing quantitative and qualitative research, Cook and Reichardt (1979) stated:

By quantitative methods, researchers have come to mean the techniques of randomized experiments, quasi-experiments, paper and pencil "objective" tests, multivariate statistical analyses, sample surveys, and the like. In contrast, qualitative methods include ethnography, case study, indepth interviews, and participant observation. (p. 7)

Qualitative research is equated with those methods or data gathering techniques which generate narrative as opposed to numerical data.

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Qualitative data take the form of verbatim interview and/or field note transcripts. What the preceding distinctions fail to take into account are the purposes served by qualitative methods and data gathering techniques. Ethnographies, case studies, intensive interviews, and participant observation can serve a variety of research purposes. For example, nurse authors described the purpose of their qualitative studies in the following ways:

In this paper I shall discuss a research approach . . . in which a given problem area is studied for the purpose of developing a conceptual framework [emphasis ours] for understanding and explaining what takes place in the realm of patient care, given certain sets of circumstances. (Quint, 1967, p. 109)

The final goal of which the nurse ethnographer should never lose sight is to grasp the patient's point of view [emphasis ours], relation to life, to his vision of the phenomenon of health and illness. (Ragucci, 1972, pp. 489–490)

Quint emphasized the usefulness of qualitative research in the generation of theory or the conceptual rendering of an area of interest. She noted that qualitative studies often provide the empirical grounding for more rigorously structured research. On the other hand, Ragucci, paraphrasing her previous quote of Malinowski, stressed that the accurate and detailed description of a point of view, a social world, is the major contribution of qualitative research. We would add that qualitative research also serves as an adjunct to studies which are primarily quantitative in nature.

Depending on the researcher's purpose, qualitative methods may be used for instrument development, illustration, sensitization, or conceptualization. In the first instance, qualitative data are important in developing or refining the instrument(s) used in a quantitative study. In the second instance, limited qualitative data are collected and used to illustrate the results of a larger, quantitative project. As a sensitizing device, qualitative findings are important in and of themselves since it is the richness and detail of the data that give the reader an understanding of the subject's social world. As the raw material of theory, qualitative data are important as a means to an end. The raw data are translated into concepts and, in turn, used to illustrate the concepts. In this case, the investigator uses the raw data primarily as a catalyst for conceptualization.

In reviewing published qualitative studies, the reporting styles reflected an absence of guidelines related to purpose. For example, in a study of reality shock among new baccalaureate graduate nurses in medical center hospitals, Kramer (1969) reported the qualitative component of her study in grounded theory terms when she actually used the qualitative data to illustrate predominantly quantitative findings. Other authors inadequately described methods or inconsistently defined purposes across the various sections of the research report. Stern (1978) described her entire research methodology simply as "constant comparative analysis" (p. 50). Kueffner (1976) concluded her report with statements reflecting a purpose of sensitization rather than conceptual development as presented in earlier sections of the article.

COMMUNICATING QUALITATIVE RESEARCH

One might expect this diversity of purpose across qualitative studies reflected in a diversity of final products. A researcher whose goal is to provide baseline data for future research will formulate a different final report than a researcher whose aim is to provide a descriptive base for nursing practice. Similarly, the end product of a grounded theory study will differ from that of a descriptive study. The reader should evaluate the quality and usefulness of a qualitative study within the context of the author's purpose. The reader should not expect theory when the purpose has been to describe; similarly, a grounded theory report may not result in recommendations for subsequent quantitative study. Authors may use identical data gathering techniques, but with different ends in mind. A clearly stated purpose will help the reader formulate a realistic set of expectations.

Existing guidelines for reporting the process and product of qualitative research usually fail to discuss the issue of purpose. Most are written from the assumption that the author's goal is to generate theory. In fact, many qualitative researchers equate excellence in qualitative reports with going beyond description to conceptualization of the data (Becker, 1970; Glaser & Strauss, 1967; Lofland, 1976; Quint, 1967; Schatzman & Strauss, 1973). However, the fact remains that not all qualitative studies result in conceptualizations because not all qualitative researchers have that purpose in mind.

The remainder of this article delineates how reports of qualitative research with differing purposes are likely to vary when reported in the standardized format of several nursing research journals. Table 1 is a guideline for either evaluating or reporting the results of a qualitative
Table 1. Summary of Guidelines for Reporting Qualitative Research Based on Study Purpose

<table>
<thead>
<tr>
<th>Research Purpose</th>
<th>Introduction</th>
<th>Sample</th>
<th>Measures</th>
<th>Procedure</th>
<th>Results</th>
<th>Discussion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instrumentation</td>
<td>Emphasis on final project and how qualitative work will contribute to instrument development</td>
<td>Comparable to subjects in final project</td>
<td>Description of nature and development of interview guide or observer's role. Discussion of how qualitative data were collected, categorized, and used in instrument development</td>
<td>Qualitative aspect of study not mentioned</td>
<td>Qualitative aspect not mentioned</td>
<td>Not mentioned in discussion unless qualitative data linked to specific methodological or research implications</td>
</tr>
<tr>
<td>Illustration</td>
<td>Emphasis on research problem being addressed in larger project</td>
<td>Comparable to subjects in larger project or subsample from larger project</td>
<td>Description of nature and development of interview guide or observer's role</td>
<td>Brief description of how qualitative aspect of study was completed</td>
<td>Interspersing of qualitative data to highlight quantitative findings</td>
<td>Not mentioned in discussion unless qualitative data linked to specific methodological or research implications</td>
</tr>
<tr>
<td>Sensitization</td>
<td>Emphasis on lack of research and/or need for indepth understanding of subject</td>
<td>Representative of target group or organization</td>
<td>Description of nature and development of interview guide or observer's role</td>
<td>Explanation of how and why data collection techniques lead to an indepth description of group or organization</td>
<td>Grouping of data into categories or types which reflect subjects' views</td>
<td>Summary of major themes and identification or practice and research implications</td>
</tr>
<tr>
<td>Conceptualization</td>
<td>Emphasis on lack of theory in a given substantive area</td>
<td>Theoretical</td>
<td>Description of nature and development of interview guide or observer's role</td>
<td>Demonstration of how emergent theory guided data collection</td>
<td>Translation of raw data into theoretical formulations illustrated by the data</td>
<td>Summary of theory or major concepts and identification of practice and research implications</td>
</tr>
<tr>
<td>(Theory Building)</td>
<td></td>
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</table>

Parts of Manuscript

- Introduction
- Sample
- Measures
- Procedure
- Results
- Discussion
project when reported in the format adopted by the American Psychological Association (Publication Manual of the American Psychological Association, 1983). We suggest that qualitative researchers explicitly structure their final reports in terms of their original purpose. Similarly, we advise the reader to formulate expectations and judgments of the work based on the author's research purpose.

**Instrumentation and Illustration**

When the investigator is using qualitative data to develop a structured instrument or to illustrate quantitative results, the qualitative component is usually a small piece of a larger quantitative study. This aspect of the study should receive comparatively little attention in the final reporting of results. In the beginning section of the report, the reader is introduced only to the questions and purposes of the larger quantitative project. The qualitative aspect of the study is described briefly in the methods section of the article. Nonprobability or convenience sampling for the qualitative component of the study often is the sampling method used. The reader should expect the subjects to be comparable to those of the larger study.

In the measures subsection, the instrument(s) used to complete the qualitative aspect of the study is described. Unstructured or semi-structured (also referred to as intensive or in depth) interviewing and participant observation frequently are used as data collection techniques. When interviews have been conducted, the author should indicate the sources of questions for the interview guide and the major topical areas covered in the guide. If the guide(s) has been pretested, the results of such testing in terms of revision(s) of the instrument should be noted. If data have been collected using participant observation, then the researcher's role in relation to the subjects should be described. The description should include the nature and extent of the researcher's participation in the organization or group studied and how the role developed and changed over the course of data collection.

If the qualitative data are used as a basis for instrumentation, the measures subsection also should describe how qualitative data were categorized and used to develop a structured instrument. For example, in developing an instrument to measure uncertainty in illness, Mishel (1981) initially interviewed 45 hospitalized patients to identify statements of uncertainty associated with illness or hospitalization. The qualitative data were categorized according to sources and types of uncertainty and transformed to a 54-item Likert scale which was administered to a larger sample of hospitalized patients and then factor analyzed. The entire report of the qualitative component was written in two paragraphs, which succinctly and adequately presented this aspect of the study. When qualitative data are used for the purpose of instrumentation, there is no need to refer to this aspect of the study in the procedure subsection of the report, since it has been described sufficiently in the measures subsection. However, if the purpose is illustration, the author should indicate in the procedure subsection how the qualitative data were collected (i.e., interviews or participant observation).

When qualitative data are collected for instrument development, the data are not mentioned in the results section of the report; rather, as indicated above, are described in the measures subsection. If the qualitative data are collected to illustrate quantitative findings, they are interspersed sparingly throughout the results section. For example, Kramer (1968) interviewed 47 newly employed graduates of three baccalaureate nursing programs to supplement quantitative data obtained on the nurses' service, professional, and bureaucratic role orientations in their new jobs. Brief excerpts from interview transcripts were reported in the results section to illustrate or clarify the meaning of group scores from quantitative measurements. If the author identifies specific methodological or research implications based on the qualitative data then this aspect of the study is included in the discussion section of the report. However, the author should not include specific qualitative findings in the discussion unless these already have been introduced in the measures or results subsections of the paper.

**Sensitization**

When the researcher is reporting the results of a descriptive study, the purpose of which is to sensitize the reader to the viewpoint of a particular group, the introduction should show that either few (if any) studies have been done on the topic, or those that have been done have failed to represent the groups' point of view.

Since the author's purpose is to represent accurately and fully the perspective of a particular group, the author should specify, in describing the sample, the characteristics of the population of which the subjects are representative. The measures subsection should be similar in content to that described in the preceding section of this paper. The development and pretesting of inter-
view guides and/or the planning for and the actual development of the researcher's role vis-à-vis the subjects should be presented.

In the procedure subsection, the author should describe carefully and succinctly how the data collection and analysis techniques were carried out to insure that the reader will understand how the approach fulfilled the original research purpose. Varying approaches to reporting the research procedure are suggested in textbooks on qualitative methods. Bogdan and Taylor (1975) listed seven procedure topics: method, time and length of study, nature and number of settings and subjects, how the subject became a subject, the researcher's frame of mind, researcher-subject relationship, and checks on the data (p. 143). Lofland (1971) listed five topics: inception and social relations, personal feelings, materials collection, analysis, and retrospect (p. 131). The difference between the two sets of guidelines highlights the lack of consensus among qualitative researchers regarding how their work should be reported.

Although differing in content, guidelines are useful to the extent that they provide the writer with an organizing framework for presenting the study design. The main problem with such guidelines is a practical one having to do with space constraints confronting any author who writes for publication in a journal. Lofland (1971), for example, listed 39 questions or topics to be addressed under five broad headings.

We suggest the following as minimal requirements for what should be reported in the procedure subsection of a qualitative report:

1. Preparation for data collection, including gaining access to study sites and subjects and training of project staff.
2. Length of time spent collecting data, how data were recorded, and the amount of data collected.
3. Steps taken to organize, categorize, or summarize the data prior to final analysis.
4. Management of threats to the validity and reliability of the data.
5. Process by which conclusions were derived from the data.

Depending on space limitations and the nature of the study being reported, the author may decide to devote comparatively more or less attention to any of the preceding topics or to add topics particularly relevant to a study.

More so than in reports of experimental and survey research, in the results section of a qualitative article, data reporting and discussion are combined. In general, the results section should comprise a synthesis of the subjects' viewpoints, either in general or with regard to the specific topic studied. The presentation must be selective as the investigator inevitably has more data than reasonably can be present in one report.

The specific organizing framework for presenting the analysis of data will vary considerably from study to study. For example, Ipema (1979) studied the experience of and recovery from rape by interviewing 11 rape victims on two separate occasions. From transcripts of the tape recorded interviews, three major content categories were identified: the victim's report of rape, rape sequelae, and disruptions of the social system. In the results section, Ipema chose to present the category of "rape sequelae" more fully than the other two categories, using both direct quotes from interviews and repetition of subjects' similar responses to convey the rape victims' common experiences.

Hampe (1975), on the other hand, used literature on needs of the grieving person to identify major topics for two interview schedules. Data from two tape recorded interviews with 27 spouses of terminally ill patients were then presented in the results section to demonstrate the meaning of each category of need to the subjects. The purpose of sensitization is found in the author's following statement introducing verbatim excerpts of data presented with some of the category descriptions: "Because the impact of the words of the spouses was so strong and at times heartrending, the significance of the study can be most clearly exemplified when the spouses' comments speak for themselves" (p. 116).

The final discussion section in a descriptive report should focus on implications for practice and future research. Specific implications are identified and discussed with reference to the organizing framework and major themes presented in the results section of the paper. If the author has fulfilled the purpose stated at the outset, then the reader is sensitized to the perspective of the group being studied. In the final section, the nursing implications of the perspectives described are presented. The author also may suggest avenues for additional research and promising approaches for such research.

Conceptualization

Several nurse authors support an inductive approach to theory development in nursing practice through the collection and use of qualitative data (Jackson, 1975; Jacobsen, 1970; Quint, 1967;
Wilson, 1977). As Jacobsen (1970) noted, "Nursing is in need of substantive theories applicable in a variety of nursing situations. It is possible to develop such theories directly from the qualitative data of everyday nursing contexts" (p. 13).

Investigators reporting such studies should introduce the reader to the conceptual or theoretical significance of the subject matter. For example, Wilson (1977) placed her study of an experimental treatment community within the context of historical social rejection of the insane. The conceptual significance of her study, implied in the introductory information, explained how a non-traditional psychiatric treatment center survives in the midst of a potentially rejecting public. When the purpose is to develop theory, it is important to alert the reader from the outset that the report is aimed at conceptualization. The study approach may be introduced as an extension of existing descriptive research, with an emphasis on identifying conceptual links among categories of data rather than simply describing the data to communicate the subject's point of view. This being the case, it is necessary to review other theories pertinent to the subject matter and to discuss the rationale for additional theorizing.

Studies often are described explicitly in terms of principles of grounded theory (Glaser & Strauss, 1967). Integral to this theory-discovering approach is theoretical sampling. The technique precludes specifying one's entire sampling design prior to data collection. Sampling decisions are dependent on analysis of the incoming data and the developing theory. The author should present major sampling decisions made during the course of data collection. These usually entail changes in the settings or subjects being studied or in the timing of observations. Further, the author should state how changes were justified in terms of the developing theory. For example, a researcher who is conceptualizing the relationship between staff nurses and patients' relatives based on observations made on adult acute care units may choose to refine and further expand the developing theory by collecting data on pediatric units or on units where a different mode of nursing care is practiced. Such changes and the rationales underlying them should be summarized in the sampling subsection. Because this is a non-conventional sampling approach, it is advisable to cite articles or texts which address the appropriateness and use of theoretical sampling for the purpose of theory development (Glaser & Strauss, 1967; Wilson, 1977).

As stated previously, the measures subsection should describe the development and nature of data collection instruments. When the author's purpose is conceptualization, changes in the instruments during the course of data collection should be noted and justified in terms of their theoretical relevance. As in the sampling subsection, the author needs to make explicit the fit between ongoing methodological decisions and the developing theory.

In a conceptualization study, as with previously discussed descriptive studies, the procedure subsection should contain what specific data collection techniques were used, the time span over which data was collected, the quantity of data collected, steps taken to organize and process the data, and limitations of the data. The author should demonstrate that specific data collection and processing steps served the overall theoretical purpose.

Research by Kueffner (1976) illustrates this point. In initiating a study of hospitalized children on isolation technique, the investigator selected a sample of children with severe burns, because "they are inevitably isolated, generally for extended periods" (p. 183). However, the author commented on how the original theoretical notion was altered by her observations as data gathering progressed. "Within the research design, it became increasingly difficult to identify behaviors relating solely to the isolation experience. It was the burn with its all-encompassing pain that dominated the situation" (p. 185). The author later incorporated this alteration in conceptualization with the original concept of isolation and a new category of data, "loss," in her formulation of a theoretical model of the passage through hospitalization of a severely burned school age child. In describing her model, Kueffner stated, "The pain, sense of aloneness, and feelings of loss experienced during hospitalization and stemming from the burn and the state of isolation, exert the dominant influence on behavior" (p. 190).

In the results section, the author's conceptual rendering of the data is presented. Specific concepts or categories of data are discussed in terms of their place within and contribution to the author's overall conceptualization of the phenomenon under study. Lofland (1971) said that "penetrating and useful qualitative analysis has the feature of striking a balance between abstract and general concepts on the one hand and description and quotations from a setting's participants on the other" (p. 128). This balance is
achieved test by interweaving theory and examples of the data from which the theory was derived.

Presenting and discussing specific results in the context of their theoretical relevance demonstrates how conceptual formulations are grounded in the data. The author should indicate the nature and scope of the data underlying conclusions and highlight the report with representative quotes from the data. Lofland (1974) suggested that approximately 60% of the report be devoted to conceptualization and 40% to presentation of data. While these percentages are likely to vary across articles, it is reasonable to expect that a grounded theory report should have proportionately more theory than description.

Lofland (1974) described the blending of results, “frame” (conceptualization), and discussion:

Frame and qualitative materials coexist as one whole, each depending upon the other for the “interest” a reader has in the frame or in the qualitative material . . . The frame taken separately is dull because the reader has little conception of the concrete empirical reality to which the frame might refer. The “data” alone are dull because the reader has no notion of what sort of social structure or process might be involved. But interpenetrated through minute and continual alternation between data and frame-elements, the whole is more than the part. (pp. 108–109)

As in virtually all reports of nursing research, the author should conclude the final discussion section with statements of the implications for nursing practice and further research and theory development needed in the area. Such implications and recommendations should be linked explicitly to the author’s conceptual formulations.

Recognizing the fact that nursing as a scientific discipline has a relatively short history of published research endeavors, we felt that clarifying the purposes of qualitative research would benefit investigators who need to know and understand a variety of research methodologies. We particularly wanted to suggest guidelines for reporting qualitative, studies, because we believe, as do others (Glaser & Strauss, 1966; Klenow, 1981; Quint, 1967), that existing misunderstandings relate to the lack of standardization in reporting this type of research.

The data collection techniques associated with qualitative studies serve a variety of research purposes. These varying purposes are, in turn, reflected in research reports with differing emphases and structures. This is especially true with regard to sensitization and conceptualization. Descriptive reports too often are criticized for not going beyond description; grounded theories are criticized for not presenting detailed descriptions of settings and subjects. Such criticisms are unjustified when viewed in terms of study purpose. They reflect misunderstanding on the part of the reader, inadequate reporting on the part of the researcher, or both. With these guidelines we have sought to reduce both misunderstanding and poor reporting. We ask readers of qualitative research to evaluate that work in the context of overall study purpose. We ask writers to state their purpose explicitly so that the reader can formulate realistic expectations.

As we have shown, varying reports of qualitative research can be adapted to a standard journal format. However, one might expect reports of qualitative studies to continue to emphasize different aspects of the research or indicate that the research was carried out in differing ways. This is as it should be since qualitative studies serve a variety of research purposes, which require varying research designs and result in several styles of research reporting.

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