

A combined qualitative methodology for nursing research

Aspects of grounded theory, ethnography, and phenomenology were combined to provide a nursing research methodology to be used in describing the human experience of miscarriage and the caring needs of women who miscarry. Rather than focus on findings, this article details the step-by-step process the researcher used to move from initial curiosity to the sharing of discovered categories. The combined qualitative strategy is offered as a methodology that is congruent with the conceptualization of nursing as a human science concerned with the diagnosis and treatment of human responses to actual and potential health problems.

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IN THE EDITOR'S page of a 1983 issue of *Nursing Research*, Downs¹ noted that qualitative researchers frequently fail to play by the rules and share their work plan. It is in response to her challenge that this article is written. My purpose is to detail the combined qualitative methodology that I employed to answer the research questions: What is the human experience of miscarriage and what are the caring needs of women who miscarry?²

This article is written in the first person, in keeping with the nature of my study. As a qualitative researcher I was uncomfortable with the subject-object, researcher-

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researched distinction. The outcome of the study was a reflection of my understanding of my informants' reality. Trying to put a description of this reality into the traditional third person research reporting style would not only be awkward but also untrue to the philosophical premise upon which the study was conducted. Not only did I value my informants' capacity to teach me about their reality, I also had to believe in my capacity to break into that reality, reflect on it, make it my own, and ultimately share my lived experience as a qualitative nurse researcher.

This article is of significance to nursing as we attempt to define our own syntactical rules in that it breaks down the actual strategy used by a nurse researcher who sought to describe the human response to a very common health problem. The methodology used evolved as I and my study progressed. It is a somewhat unique blending of the phenomenological, grounded theory, and ethnographic methodologies. The combined qualitative strategy described is offered as a nursing-appropriate methodology that fits our unique phenomena of discernment, namely, persons, environments, health, and nursing.³⁻⁸

As nurses we are clearly in the business of understanding and caring for humans. Nursing is a human science and as such our phenomena of scrutiny are somewhat capricious at best. The notion of a "human science" is a term described by Giorgi⁹ in his attempt to find a niche for the so-called Third Force psychology (a psychology of the person as a whole versus the more restricted psychoanalytic or behavioristic views of psychology). Since nursing studies the whole person in relation to health

concerns, it seems logical to use Giorgi's arguments for a "human science" for nursing also. Giorgi states:

Moreover, it is precisely the prejudice that Third Force psychology [nursing] must be antiscientific or nonscientific that we would like to challenge. Consequently, both the term "human" and the term "science" are important to us. We would insist upon the relevance of the term *human* to those who want to build a psychology [nursing] of the human person according to conceptions of science as developed by the natural sciences and who adhere rigidly to that concept despite changes in subject matter. We would insist upon the relevance of *science* for those who want to study the humanistic aspects of man without any concern for method or rigor whatsoever.^{9(pxi)}

In essence, the notion of human science embodies the valuing of the person as a whole *with* the need for rigor in study. The idea of rigor does not mean that the human sciences, which deal with humans, feelings, and lived experiences, need adhere to the accepted rules and assumptions of the natural sciences, which seek to describe, predict, and control more objective matter.

Nurses must explore how best to study their own concerns. We need to allow ourselves the comfort to recognize that those values and methods that hold up well elsewhere should not dictate how we choose to go about answering questions that arise from our science or humanistic practice. A science of humans will seek to generate those methods that allow us to study and value persons as holistic, unique individuals who are in the process of becoming and who must be studied in

their own environment. Simply put, we should let our nursing questions guide our methods while being ever aware that the methods will shape our answers.

THE MISCARRIAGE STUDY

Before describing the methodology employed, a brief summary of the miscarriage study is necessary. I began my quest to describe the human experience of miscarriage and the caring needs of women who miscarry with a curiosity derived from hearing a number of women in my Cesarean Birth Support Group discuss how painful and lonely their previous miscarriages had been. Since I was not a maternal-child nurse and had never miscarried myself, I attempted to satiate my initial curiosity with a fairly exhaustive review of the miscarriage, perinatal loss, and loss-in-general literature. It did not take me long to realize that traditional profiles of miscarriage in the professional literature fell far short of capturing the mother's lived experience. Given this insight I resorted to surveying the consumer literature (ie, *Redbook*, *Babytalk*, *Good Housekeeping*) for a number of "How I Survived My Miscarriage"-type articles.

I must admit that in the beginning I was not so sure I wanted to study something qualitative in nature. Scientific reality for nursing (and for me) seemed to reflect more clearly a certain comfort level with

quantifiable phenomena. Science, as I understood it, seemed to have a rather straightforward meaning that emphasized a mandate for objectivity, verifiability, and repeatability. However, reflection on this stance on rigorous study made me realize that I was *receiving* a version of "science reality" that was born in a supposedly objective, quantifiable, and repeatable world. Given my insights over time and the finding that there were no useful objective data on the mother's experience of miscarriage, I was forced to redefine rigor for my study as a disciplined attempt to capture adequately, succinctly, and creatively the lived experience and caring needs of women who miscarried.

Based on my growing curiosity, a small pilot study of five women who had recently miscarried, the literature, and my assumptions about nursing, loss, grief, and life in general, I then produced a tentative interview schedule. This schedule remained somewhat indefinite throughout the entire study; I used it only as a guideline. It was my attempt to maintain a proper balance of structure and looseness. The structure was to facilitate inclusion of all those questions I thought to be important; the looseness was to enhance the informant's capacity to introduce topics that she knew to be important. Each interview was considered a source of questions to be asked in all subsequent interviews. I recognized the expertise of my informants, my naiveté as a researcher (both substantively and syntactically), and the exploratory nature of the study I was undertaking.

In the beginning I questioned what was the right qualitative method to use. I had in mind a plan but felt it was inappropriate

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not to have an official, sanctioned, qualitative name for my strategy. Over time I have, admittedly, come to realize two important things: 1) Many qualitative researchers do what works under the guise of an official, recognized, qualitative method; and 2) there is a reason qualitative researchers fail to share their work plan as Downs¹ observed—that is, it is nearly impossible to describe a matrix-like process in a linear format. We simply do not have the luxury of describing the whole process in the simple statement “An analysis of variance was done.”

I call this methodology “combined” because of the different qualitative strategies that I employed to support my plan. Phenomenology as described by Giorgi,⁹ Marton and Svensson,¹⁰ and Oiler¹¹ lent a goal to the study: to describe the human experience of miscarriage as it is lived. Spradley’s¹² ethnographic sequence provided direction for data collection. Grounded theory as described by Glaser and Strauss¹³ and clarified by Stern¹⁴ suggested a means for data analysis. I felt somewhat justified in picking and choosing aspects of each of these methods to suit my purposes. Just as I believe it is wrong to let other disciplines dictate our subject matter, so too is it inappropriate to simply receive and use a methodology because it worked well elsewhere.

THE PROCESS: STEP BY STEP

The steps that I used to get from my initial curiosity to the final presentation of findings will be described in an outline format. Since I have already briefly described how the first draft of the interview schedule was generated, this step-

by-step strategy will begin with a brief description of the method utilized to locate informants.

Step I: locating informants

Via the phone and in person, obstetrical care providers within a 50-mile radius were asked to refer women to the study. All informants were to have experienced spontaneous abortion within 15 weeks of study entry and were not yet to have felt fetal movement. Initially, no attempt was made to specify social or obstetrical variables for inclusion in the study. However, as the study progressed, I did make some attempts to vary a few of the demographic variables (ie, race, age, and marital status). A total of 20 women participated.

Step II: the interview and data collection

Informants were told that they were being asked to describe their miscarriage experience and caring needs. Their anonymity was guaranteed and signed informed consent was obtained.

All interviews were taped; there were two interviews per informant. All informants were referred to by a number, ie, the first informant was called “*One*.” At that first interview, I was nervous and rigidly stuck to the interview schedule; in spite of me, *One* managed to share her experience.

The next day, *One*’s tape was dropped off with the transcriber to be typed verbatim into a mainframe computer.

By the time I interviewed *Three*, I usually had to remind myself to pull the interview schedule out of my briefcase at the interview’s conclusion to see if I had missed any questions. Whereas I initially feared I could

not make the interviews last an hour, I soon feared they would not end in two hours. (The transcription cost per hour of interview time adds up quickly—qualitative research can be quite expensive.)

Two weeks after *One* was interviewed, the transcription of her tape was completed and analysis began. From here on transcribed tapes slowly "trickled in." Generally, I was about four interviews ahead of the transcripts (ie, I was interviewing *Six* before I had analyzed *Two's* transcript).

Four weeks after *One's* initial interview, arrangements were made to schedule her second interview. My goal was to interview all informants four weeks after their first interview. As it was, second interviews were often delayed by summer vacations and consequently occurred from four to ten weeks after the initial interview. The purposes of the second interview were threefold: 1) to clear up any misperceptions from the first interview, 2) to check on informant's progress over time, and 3) to validate the emerging categories. Most of the second interviews took place over the phone and lasted from 15 to 30 minutes. Before the second interview, each informant's first interview had been coded and specific questions about the unclear parts of her first interview had been formulated. In addition, a baseline set of questions was asked of all informants at the second interview. These questions were a bit more directive and they clearly reflected the purposes of the second interview.

First interviews were completed approximately ten weeks after data collection began. Second interviews were completed approximately 14 weeks after data collection began.

Next I will describe the analysis of the

data. For purposes of presentation I have presented data collection and analysis separately. It must, however, be made clear that these two steps actually occurred simultaneously and that separation of the two steps is more of an academic exercise than a reflection of reality. Even as I interviewed I analyzed. It was the analytic listening and reflection that made the interviews open to each informant's unique input.

Step III: analysis

Coding the data

As soon as *One's* raw transcript was received, I listened to the tape while reading the transcript. This exercise allowed me to 1) relive the interview in "real time" (I could read a transcript in less time than my informant and I actually took to speak), 2) listen for and note on the transcript any meaning-filled pauses or display of emotions, and 3) correct any errors in transcription.

It was at this point that I was ready to use *The Ethnograph*, which is a computer software program designed by Dr. John Seidel of the University of Colorado and Dr. Jack Clark of Harvard.¹⁵ *The Ethnograph* provides the researcher with a convenient means of storing and sorting through the massive amounts of data that accrue in qualitative research. It must be made clear that this program in no way substitutes for the rigor or analytic creativity of the researcher. In truth *The Ethnograph* serves as little more than the traditional qualitative researcher's index cards, scissors, pot of glue, and very messy living room floor.

The first step of *The Ethnograph* actually involved the transcription of interview data

into the computer. Step II simply involved instructing the computer to 1) format transcript lines down to lines that were 40 characters in length, thus leaving the entire right-hand side of the page empty; and 2) sequentially number each line of the transcript.

Lines of the sequentially numbered transcript were then ready for hand coding, which involves writing in codes on the empty right-hand side of the page. A code is a word that I used as an index marker that aided me in breaking the transcripts down by topics that were addressed in our conversations. The codes were very close to the data: I did not attempt to make any leaps between what was said and what I thought was meant. For example, if the woman talked about her sexual relationship with her spouse, I coded it "sex." Codes were added on as needed throughout analysis. For example, if *Seven* introduced the topic of postpartum weight loss, the code "weight" was added. The addition of a new code word usually meant reexamining the transcripts of previous informants for that newly recognized code. The purpose of coding was to facilitate analysis later on in the study. When I was ready to support the categories that emerged from the study, I was able to sort through the long transcripts rapidly using the coded segments as index markers. In all there were 84 codes.

The hand codes were typed into the computer. *The Ethnograph* uses a variety of user-directed symbols (ie, #, @, *) to indicate start and stop lines for segments of transcripts addressed by any given code.

The final phase of *The Ethnograph* involves directing the computer to sort through each transcript for every occur-

rence of a given code, ie, every time a segment of *One's* transcripts addressed the code "sex," the segment was retrieved and printed out on *One's* sort page entitled "sex." Fig 1 is an example of a sort page. It is a page sorted by the code "parents" for informant number *Six*. Note that there were two points (lines 139-144 and 910-917) in the interview in which *Six* spoke about her parents.

At this point, I had two filing systems. Since there were 20 informants, I had 20 informant files labeled one through twenty; and since there were 84 codes, I had 84 code files labeled "abort" through "why me." The informant files contained each informant's completely coded first and second interview transcripts. The code files contained sort pages that had every instance of a code being addressed by any one of the 20 informants (ie, the code file "parent" contained sort pages [excerpts] from each informant who spoke about her parents during our interviews.)

Category development

Constant reflection on the data gathered to date ensued throughout the entire study. Categories evolved as a result of my living my research study. I found myself constantly comparing informant to informant,

Categories evolved as a result of my living my research study.

informant to emerging category, category to category, and category to the literature reviewed as well as the assumptions with which I began the study. Obviously, the intensity of this reflective process, or as I

	SIX:	#PARENTS
139	SIX: Yes, because he comes from a family that believes you should—once you get married, you should have children right away.	#PARENTS ^a
	ME: Uh-huh.	
	SIX: And his sisters have gotten married, and they've had children right away, and us—we're still here.	#OTHMOTH ^b
144	ME and SIX: And no children.	\$ ^c
	SIX:	#PARENTS
910	SIX: Saturday morning, I woke up and they checked me, and he said, "We'll just have to wait and see what happens." So, my mom, everybody came—my sister, my friend Elise came. I didn't see Elise or my mom. My mom came in the morning and my sister and Michelle, my cousin, and Timmy's girlfriend—they came. And Mom brought me some nightgowns, and she said I looked really pale. And I didn't look good at all. And she said, "What did the doctor say?" And I said, just to wait and see. She said, "I can't believe this is all they are doing. They're just	#PARENTS
917	waiting. What are they waiting for?" I said, "I don't know."	\$

Fig 1. An example of an ethnograph-generated sort page for the code "parents" for informant *Six*; a = beginning of discussion of *Six*'s parents; b = imbedding of discussion of other mothers; c = conclusion of discussion of "parents" and "othmoth."

call it, the saturation of the researcher, increased as the data collection ensued. In truth the categories were intuited from my ceaseless interaction with the data.

While reading some of the earliest transcripts, I was struck by the fact that all of the informants to date (pilot informants included) seemed to take a while to realize they were miscarrying. Thus the first category, which I called "Coming to Know," was seeded.

For each category the initial seeded hunch led to a rigorous, detailed examination of all transcripts for a) validation of the hunch; b) definition and delineation of steps, sequences, processes, and variations that comprise the category; c) meaningfulness of the category for each informant; and finally, d) key informant statements that would support my analysis in the final presentation of the discovered categories.

The remaining categories were devel-

oped over time. By the time I had completed my first round of interviews, I felt fairly comfortable with the fact that I had probably identified the six human experience of miscarriage categories (coming to know, losing and gaining, sharing the loss, getting through it, going public, and trying again) and the five caring categories (knowing, being with, doing for, enabling, and maintaining belief).² I did not aim for the number of categories that evolved; they just grew out of the data. Second interviews provided the opportunity to ask questions that helped me to better clarify the meaning of each category.

The concrescence of the categories came in the write-up of the data. The categories were conceptually larger than the codes and summarized processes each woman seemed to experience as she lived her early pregnancy loss. For example, the category "coming to know" demonstrates one way

in which the codes and categories were related. The process of "coming to know" was supported by informants' statements in the code sequence: PREV (previous ideas the woman had about miscarriage); PREM (premonitions of self as miscarrying); FIRST (first sign of miscarriage); WAIT (the hope-no hope waiting period); CONFIRM (point at which the woman felt certain that the pregnancy and life within were nonviable); and REAL (postpartum realization that she was no longer pregnant).

Although the categories were universal, each woman expressed herself uniquely within any given category. Once again, "coming to know" will be used to demonstrate this. The point of confirmation seemed to be a universal, necessary step in truly realizing that there was more than just a complicated pregnancy and that there was actually going to be no baby. This confirmation took a variety of forms. For some women ultrasound findings were sufficient; others realized their fate by seeing the pain in the physician's or ultrasonographer's eyes. A couple of women had confirmation by signs from their own bodies, such as a change in volume or coloring of blood flow, and one woman had confirmation when she saw her own drained, pale face in the mirror. Whatever the form confirmation took it was almost universally expressed as "And then I knew. . . ."

This outline of the methodology I employed raises three challenges: 1) How appropriate is it to use intuition as the ultimate means to transform data into categories? 2) How does one convincingly, succinctly, and creatively present the intu-

ited categories? and 3) How do intuitive researchers portray themselves as reliable researchers and their categories as a valid representation of informants' human experience?

The first issue of using intuition in scientific inquiry is addressed by Johnson¹⁶ in his argument for an existential human science:

An existential science demands that we risk our personal being in a violent thrust down into the "flux and fire" of life. It is only at such depths that we break through the intellectual symbols of scientism and grasp existence with the passion of our hearts . . . an existential science demands that the methods we use to study man be as ardent and as sensitive as the human subject matter which we seek to discover and understand.^{16(pp16-17)}

The reflective nature of qualitative research must leave room for the fact that ideas are "intuited"; and by their very nature intuitions come where and when they will, which is not always where or when they were sought. It is very difficult to share how much of the actual analysis (developing and "thinking through" categories) was done away from my desk or computer. In many ways, I vicariously lived my informants' loss. Embracing their reality proved to be an emotional as well as an intellectual challenge. My reflections on miscarriage became my constant companion: I lived, walked, talked, and slept my study. Johnson supports the validity of my intellectual and emotional struggle by referring to the historical philosophical writings of Bergson:

Now it is clear that any new advance . . . demands a method that can give us direct

access to the internal organization and existential reality of phenomena themselves. Bergson argues that intuition is the only method of investigation that can provide us such direct access to the mystery of existence and to the absolute nature of reality. He means by intuition a "kind of *intellectual sympathy*" by which one places oneself within an object in order to coincide with what is unique in it.^{16(p229)}

SHARING THE DISCOVERY

Categories discovered were described and simultaneously supported by the informants' statements, my reflections on their statements, and where appropriate by a return to the literature and my earlier assumptions. There were a number of ways in which I actually presented the categories: 1) In the most often used format, I would name the category, define it, discuss the sequence of events or experiences that constituted the category, and support each aspect of the category with one or two poignant exemplary informant quotes; 2) Categories were presented in running text in which informants' quotes were woven into my dialogue; 3) Some categories were supported in tables that sampled a representative statement of all 20 informants. For example, Table 1 is a part of the table used to support the category "losing and gaining"; 4) An association between two of the categories ("sharing the loss" and "getting through it") was demonstrated by following the experience of four informants in both categories; 5) There was an instance in which a statistical mean was computed to define an average length of time to get through the acute grieving period; and finally, 6) The "caring" categories

were discussed in terms of the "human experience" categories as appropriate.

RESEARCH ISSUES

Some of my qualitative colleagues have criticized me for having addressed the issues of reliability and validity in this study. It has been the contention of the critics that a qualitative study is a summary of the researcher's experience of the informants' reality and as such it is a valid representation of the researcher's reality, thus making issues of reliability or validity moot points.

I, however, believe that as a practice discipline our research ultimately has to be meaningful in practice. Therefore, in this study, I attended to the research issues of reliability and validity in the following ways:

1. The content validity of the interview schedule was attempted in two ways: by asking two women who had experienced multiple miscarriages to review the schedule for its comprehensiveness and by asking each informant at the conclusion of her interview if there was anything I failed to address in her interview that she felt I should be asking. Both strategies led to the addition of new questions to the interview schedule.
2. The reliability of the researcher was addressed by asking an expert nurse ethnographer to review several transcripts for how reliably she felt I was able to assist the informants in validly sharing their experience.
3. Interrater reliability was attempted by asking two practicing obstetrical

Table 1. Excerpt from the research table used to support the category "losing and gaining"

Informant	Were you attached? Why?	What did you lose?	What did you gain?	Can you sum it all up in one word or phrase?
Sixteen	I thought about Kay's baby brother or sister. The visions were always two children. Fantasize. Dreams, planning, always thinking about the family, always, always. It was the new kid. He had a name. Unborn one . . . After having two, yeah I would say so, I had already imagined what it would look like, what kind of personality.	A child, Kay's baby brother or sister that would only be 21 months apart from her and be her friend and play with her.	I can't think of anything. Not a thing.	Pain. It hurts. It's unfair. It comes out of nowhere. It's gone, boom. You can't have it anymore.
Seventeen	Unborn one . . . After having two, yeah I would say so, I had already imagined what it would look like, what kind of personality.	Future expectations. Somehow I felt this one would not have been normal . . . the possibility of probably ever having another one.	Our relationship is probably better than it's been in a long time.	It's like losing a child be it born or not born . . . It doesn't matter. It's still a child and you know it's a child.
Eighteen	We gave it a stupid name. My body was changing. I wouldn't look at the ultrasound, didn't want to become more attached.	A loss of life, a fetus/child, loss of control, plans, a life style, all of a sudden, I wasn't pregnant any more.	Better that this would have happened than perhaps giving birth to a child that would die shortly after . . . or be very deformed . . . very defective.	Loss of control encompasses it all . . . The planning, all the hope, the one thing that you want so much to control . . . you don't. It's just devastating.

nurses to read the results section of the study and then to try to use the categories to rate an informant's transcript for presence or absence of categories. I also saw this as a measure of how clearly I had communicated my findings as well as how useful the categories were to use in terms of assessment.

4. Construct validity, or how close I really came to capturing the human experience of miscarriage and the caring needs of women who miscarry, was addressed by asking two experts to review the results section and one transcript. The experts consisted of a doctorally prepared nurse midwife whose research is also on pregnancy loss and a consumer who had experienced several miscarriages. Their charge was to answer the two questions, how close the study came to reflecting their experience with miscarriage, and given their experience and the experience of the informant whose transcript they read, how well the categories were able to capture the two experiences.

THE NURSE AS RESEARCHER

There are three issues that I debate as I continue to use this methodology: 1) Are issues of reliability and validity of concern when doing qualitative research in nursing? 2) How useful is this method, including the use of Seidel and Clark's *Ethnograph*,¹⁵ for advancing nursing science? And do the results justify the expense in terms of time, finances, emotional drain,

and energy exerted? 3) What is the role of the nurse in nursing research?

Since I have not previously addressed the last of the three issues, I will conclude with my reflections on the role of nurse as researcher. The nurse ethnographer whom I asked to review my tapes criticized me for acting like a nurse in an interview. In truth not only did I act as a nurse, but I also acted as a mother and as a woman. For example, near the conclusion of an interview one of my younger informants who was a new bride and who lived at a distance from friends and family asked me what the right days of the month were to get pregnant. We had been having a very warm, open interview and I saw this as my opportunity to repay her for her giving. She had shared her miscarriage expertise, and I was glad to share my expertise as a nurse and an older, experienced child-bearing woman.

The same reviewer also stated that if she had not listened to my tapes with her own

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ears she never would have believed I could have obtained such rich data. It is my stand that as nurses we have a natural talent for and professional ease with assessing issues of an intimate nature. Rather than downplay the role of nurses in research, perhaps we should embellish it. Also, it is false to assume people can ignore the fact that we are nurses, women, or mothers. I have

often since wondered, if my informants had been told by their obstetricians that an ethnographic researcher was coming to call on them, would their doors have been as wide open?

While with informants, we shun the researcher-subject distinction and recognize the fruitfulness of our intersubjective copresence. It is later when home alone with the data that we strive for objectivity.

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