EDITORIAL

What's Wrong With Random Selection?

Students tell me that questions almost certainly asked when they defend their research proposals or their dissertations relate to sample selection. An examiner invariably will ask, "Why are you not selecting [or did you not select, as the case may be] your sample randomly? How do you know it will be representative? How are you going to avoid bias?"

Inherent in these questions are several assumptions, some more evident than others. The first assumption is related to the representativeness of the sample. Ensuring that the sample is representative is accomplished in quantitative research by checking that the dimensions of demographic characteristics with the population match those of the sample. The assumption is that *if* the demographic characteristics are equivalent *and* everyone in the population has an equal chance of being selected, then whatever characteristic is being researched also is likely to be equally represented in the sample. Another assumption is that characteristics are normally distributed within populations. Therefore, a randomly selected sample also will provide a sample in which the characteristics of the research topic are normally distributed. Thus, the study results can be generalized back to the original population.

None of these features facilitates qualitative inquiry. In fact, these features render qualitative research impossible and the results invalid. The very techniques designed to ensure validity backfire and result in useless research. Why?

The first problem with using a random sample for the selection of participants in qualitative study, issues of representativeness aside, pertains to the bulky nature of textual qualitative data. The volume of data collected means that there is an optimal number of participants, each of whom provides some quantity of data. If this amount of data is exceeded (i.e., the data set is oversaturated), then redundancy occurs and the data are useless and wasted. In qualitative research, there is no set "formula" to determine the sample size, but there are two principles. First, there is an inverse relationship between the amount of data obtained from each participant and the number of participants (i.e., the more data obtained from each, the fewer participants required and vice versa). Second, the greater the diversity inherent in the research topic, the longer it takes to reach saturation and, therefore, the larger the sample size.

Now let us discuss why demographic indexes of *representativeness* do not assist qualitative inquiry. The phenomena in which qualitative researchers are interested—in the case of *Qualitative Health Research* readership, the experiences of illness, health, and caregiving—transcend demographic indexes used by sociology. In fact, Glaser notes that these indexes must *earn* their way into a theory. (As an anthropologist, however, I believe in cultural variation, and if I am using a multicul-

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tural sample, then I am careful to saturate data obtained from each group participating in the study.) Instead of using demographics for sample selection, qualitative researchers seek participants who can well represent the phenomenon of interest. That means we seek participants who have experience—the *most experience*—in the topic of interest. Yes, the sample *is* biased; it *must* be biased. When we begin sampling, we are not interested in the "average" response because we do not know the characteristics of the phenomenon and must first identify these. These characteristics are easier to identify in participants where these characteristics are most evident. This technique is not abhorrent to science; chemists work with pure samples, and that is not considered a bias. Rather, similar to qualitative inquiry, contamination at the initial stages of work can invalidate the results or prolong inquiry. Variation in responses can be explored later in the sampling process, that is, once the researchers understand what they are actually looking for, can see it, and can (at least partially) understand it.

The second reason is most frequently cited in the qualitative methods sections of articles. Because of the nature of qualitative data, qualitative researchers must find participants who are willing to cooperate and to provide data. These participants not only must have experience in the topic but also must be willing to spend the time required to be interviewed—to reflect on and share their experiences—and must have the ability to express themselves and be willing to share these intimate and often distressing experiences with the researchers. Unfortunately, agreeing to participate in qualitative studies does not necessarily mean that the participants have these qualities, and interviews conducted with unqualified participants do not contribute to the researchers' developing understanding of the phenomenon. For this reason, it is more efficient to identify those participants who would be good participants before taking the time to interview the individuals. I advise students to practice *secondary selection* if they have conducted interviews that they think will not be helpful; that is, do not erase the tape, but put the interview aside without transcribing it (it can be transcribed later, if necessary) and move on. Things that are not helpful need not be included in the analysis. (Note that "not helpful" is different from contradiction, or negative cases, which *must* be followed through and included in the emerging model.)

If we were to select a qualitative sample using the quantitative criterion of randomness, then our data would have several awkward features.

First, because the material would be normally distributed, we would have too much data about some topics (those that fall within 1 standard deviation of the most common experience), which results in redundancy and wasted time and resources. In addition, the experiences of persons in the tails of our distribution would be underrepresented, and data from these participants would be too thin. Continuing our random sampling to get additional data on these participants would compound our problem of too much data about more common experiences.

Second, qualitative researchers have only limited interest in frequencies; that is, they are only interested in repetition and qualitative distinctions of intensity, not in how many or how much. But of primary importance, they must know *what is* and be able to describe the phenomenon and explain all its quirks and nuances. Because the phenomena in which we are interested do not usually follow demographic trends, we almost certainly will have too much data about some particular event or experience and gaps and holes in our data about other events; that is, we would find it

nearly impossible to obtain saturation and develop our theory coherently, fairly, and validly.

What, then, are the examiners' fears regarding bias? There is another issue, another concern with bias that is a real threat to validity that I have not discussed—the issue of setting out "to prove one's case" by deliberately selecting participants who will support the researchers' perspective or presuppositions and ignoring those participants who will not support the researchers' ideas. Qualitative researchers have mechanisms for avoiding these deductive threats to validity, and if this was the fear of the examiner, then my response would be to simply explain that randomly selecting the sample would *not prevent* this particular threat to validity; qualitative researchers have other strategies to avoid working deductively.

Therefore, when defending your dissertation, answer your examiner directly. Remember, qualitative researchers use bias and deliberately select a biased sample. It is the wise and smart use of bias that enables our research to be efficient and valid and our theories to be elegant and whole.

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