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Consensual Qualitative Research: An Update

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The authors reviewed the application of consensual qualitative research (CQR) in 27 studies published since the method's introduction to the field in 1997 by C. E. Hill, B. J. Thompson, and E. N. Williams (1997). After

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first describing the core components and the philosophical underpinnings of CQR, the authors examined how it has been applied in terms of the consensus process, biases, research teams, data collection, data analysis, and writing up the results and discussion sections of articles. On the basis of problems that have arisen in each of these areas, the authors made recommendations for modifications of the method. The authors concluded that CQR is a viable qualitative method and suggest several ideas for research on the method itself.

In the early 1990s, when we wanted to conduct qualitative research, we explored several different approaches. Although the existing qualitative approaches had a number of valuable features, we were frustrated because the descriptions seemed vague, difficult to comprehend, and equally difficult to implement. Hence, based on our experiences, we (Hill, Thompson, & Williams, 1997) developed consensual qualitative research (CQR), which we hoped would integrate the best features of the existing methods and also be rigorous and easy to learn.

Now that CQR has been in existence for a few years, we can step back and assess whether we have accomplished our goal. In doing so, we can examine what features of the method have been used effectively and determine whether any features need to be revised. The purpose of this article, then, is to provide a critical review of CQR. For this review, we considered the corpus of 27 studies published between 1994 and 2003 that used CQR as the primary data analysis method (see the References list). We found these studies through personal contacts, by searching journals likely to publish CQR research (i.e., *Journal of Counseling Psychology*, *The Counseling Psychologist*, *Psychotherapy Research*), and by searching PsycINFO.

As is common in qualitative reports, we present our potential biases about this review up front. All of us have extensive experience with the method through authoring 19 of the 27 studies in the corpus and/or contributing to the 1997 publication of the method. (The other 8 studies were conducted by researchers who did not collaborate with us, thereby providing some evidence for the portability of CQR; that is, the method can be learned by reading the published materials). Hence, we state up front that we all believe in CQR and are eager to improve it.

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In this article, we divide CQR into several major components: the consensus process, researcher biases, the research team, data collection, data analysis, and writing up the results and discussion sections. We discuss controversies within each of these components and make recommendations for future research. Given space considerations, we do not review noncontroversial areas (e.g., how to recruit participants, how to transcribe interviews), nor do we provide examples of how to conduct CQR (see Hill et al., 1997, for more details). But first, we describe CQR and locate it within the qualitative tradition.

What Is CQR?

The essential components of CQR are the use of (a) open-ended questions in semistructured data collection techniques (typically in interviews), which allow for the collection of consistent data across individuals as well as a more in-depth examination of individual experiences; (b) several judges throughout the data analysis process to foster multiple perspectives; (c) consensus to arrive at judgments about the meaning of the data; (d) at least one auditor to check the work of the primary team of judges and minimize the effects of groupthink in the primary team; and (e) domains, core ideas, and cross-analyses in the data analysis.

CQR incorporates elements from phenomenological (Giorgi, 1985), grounded theory (Strauss & Corbin, 1998), and comprehensive process analysis (Elliott, 1989). From these qualitative approaches, we adopted the emphasis on consensus among judges to construct findings and the use of words rather than numbers to reflect meaning in the data. We also incorporated some elements from exploratory, discovery-oriented methods (e.g., the emphasis on consistency of data collection across participants, use of multiple judges, and agreement among judges; Hill, 1990; Hill & Lambert, 2004; Mahrer, 1988).

In terms of a philosophical stance, CQR is predominantly constructivist, with some postpositivist elements. We explicate this position using Ponterotto's (2005) five constructs of ontology, epistemology, axiology, rhetorical structure, and methods.

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In terms of the nature of reality (i.e., ontology), CQR is constructivist. We recognize that people construct their reality and that there are multiple, equally valid, socially constructed versions of "the truth." We also look for commonalities of experience among participants, which is another form of constructed reality.

With respect to epistemology (i.e., the relationship between the participant and the researcher), CQR is constructivist, with a hint of postpositivism. We view the researcher and the participant as having mutual influence on each other: The participant teaches the researcher about the phenomenon, and the researcher influences the participant through the probes used to help the participant explore his or her experiences. The interviewer's role is typically as a trustworthy reporter trying to uncover what the participant truly believes, rather than as someone who engages with the participant in a deeply relational way to coconstruct meaning. Relatedly, we use a standard protocol (with options for exploring individual experiences in depth) across participants so that we acquire consistent areas of information (which has a postpositivist flair).

In terms of axiology (i.e., the role of the researcher's values in the scientific process), CQR lies midway between constructivism and postpositivism. We believe that researcher biases are inevitable and should be discussed at length (constructivistic) so that they can be kept in check and not unduly influence the results (postpositivistic). As much as possible, we want to faithfully represent how participants describe their experiences rather than communicate how we as researchers experience the world (postpositivistic). We also seek to minimize the idiosyncratic impact of the interviewers by using consistent interview protocols and encouraging interviewers to be aware of their biases (postpositivistic). We acknowledge, however, that our biases as researchers do influence our understanding and analysis of the data, and so we endeavor to disclose these biases and report how they may have influenced the analysis (constructivistic).

In our rhetorical structure (i.e., language used to present the procedures and results of the research to the intended audience), we are somewhat postpositivist in that we report data in the third person. We strive to be objective, summarizing the participants' words and remaining close to the data rather than making major leaps of

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interpretation. We also look for themes across participants and hope to generalize, at least to some degree, to the population.

Finally, with regard to our methods, we are clearly constructivist. We rely on naturalistic, highly interactive data collection methods. We strive to uncover meaning through words and text. We do not use experimental or quasi-experimental methods, nor do we use quantitative methods, although we might compare our qualitative findings with quantitative findings to triangulate results. Furthermore, the research team uses consensus to construct their interpretation of the data, trying to set aside their biases so that they fairly describe what the participant has reported.

The Consensus Process

Consensus, an integral part of the CQR method (Hill et al., 1997), "relies on mutual respect, equal involvement, and shared power" (p. 523). Similar to both feminist and multicultural approaches to psychology, a diversity of viewpoints is valued, honored, and protected (Williams & Barber, 2004). In fact, the use of consensus has been shown to improve decision quality (Michaelsen, Watson, & Black, 1989; Sundstrom, Busby, & Bobrow, 1997) by taking into account both commonly held and minority views (Miller, 1989). Because subtle meanings may be conveyed through the interview process in CQR, this variety of viewpoints and experiences among the team members may help unravel the complexities and ambiguities of the data. Thus, a common understanding of the data is sought while preserving the right of individual team members to hold differing worldviews. To attain consensus, the CQR process demands that the team members discuss disagreements and feelings, which requires that team members have strong interpersonal skills as well as like and respect each other.

Despite the integral role of consensus in CQR, we know very little about what actually happened in the published studies. In the only study to assess the consensus process, Juntunen et al. (2001) listened to audiotapes of data analysis meetings and determined that each team member shared opinions and that there was equitable discussion before reaching consensus.

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One dynamic that sometimes influences the consensus process is when interviewers believe that they have more "accurate" information about an interview than do other team members. Our recommendation is that, in such cases, all of the team members listen to the interview tapes, in addition to reading the transcripts, so that everyone can "hear" any subtle meanings conveyed by voice tone, volume, or pacing.

Researchers' Biases

Hill et al. (1997) suggested that researchers report both expectations ("beliefs that researchers have formed based on reading the literature and thinking about and developing research questions," p. 538) and biases ("personal issues that make it difficult for researchers to respond objectively to the data," p. 539) so that readers can evaluate the findings with this knowledge in mind. In the corpus, however, expectations and biases were typically not differentiated, and the procedures for reporting them varied from study to study (e.g., biases about expectations, biases and expectations, reactions). Clearly, the distinction between expectations and biases was not understood as presented or was not considered to be helpful. After further consideration, we think that expectations are frequently reflected in introductions to studies in which researchers review the literature and provide the rationale for their research questions, and thus do not need to be explicated further elsewhere.

In contrast, we continue to believe that biases are important to take into consideration. Biases may arise from several different sources, the first being the demographic characteristics of the team. The authors in the corpus were primarily women (i.e., 10 teams were all women; no team was all men); European American (i.e., 13 teams were all European American, four did not specify, the remainder were mixed); and humanistic/feminist/psychodynamic in their theoretical orientations (at least in the six studies that reported theoretical orientation), which may have reflected a certain set of biases, although these were not discussed in the articles.

Biases can also be reflected in values and beliefs about the topic. In the corpus, researchers typically discussed their feelings and

reactions to the topic prior to beginning their studies and presented these in the Method section to provide a context in which readers could evaluate the results. Furthermore, in Discussion sections, researchers in 10 studies mentioned biases as a potential limitation and in four studies alluded to the impact of biases through statements such as "as anticipated" or "surprising." Reporting unexpected findings can help bolster the argument that researchers were able to see beyond their biases.

For future research, we continue to recommend that researchers report potential biases (both demographic and feelings/reactions to the topic) in the Participants section of the article (see Fuertes, Mueller, Chauhan, Walker, & Ladany, 2002; Pearson & Bieschke, 2001, for good examples). We also now recommend that researchers include in their Discussion section(s) an honest assessment of how expectations and biases influenced the data analysis. Given this recommendation for candor, we strongly encourage journal reviewers to recognize that biases are a natural part of this process, rather than viewing openness about biases as indicative of problems in data analysis.

Even more importantly, researchers should discuss their biases with each other prior to, and throughout, the research process to ensure that these biases do not unduly influence the data analysis. As evidence that bias may be operating, researchers should attend to situations in which interviewers accept what participants say at face value without further questioning, or when team members acquiesce too quickly to the other members of the team or hold on too doggedly to an opinion without evidence (Strauss & Corbin, 1998).

Research Team

Set Versus Rotating Primary Teams

In the corpus, 18 studies used set teams (i.e., two to five primary team members completed the domains, core ideas, and cross analysis; one or two separate auditors reviewed their work), whereas nine used rotating teams (i.e., 4–12 team members rotated doing all tasks). An advantage of the set team format is that all primary team

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members are involved in the tasks of creating domains and core ideas for all of the cases and are thus immersed in all of the data; a disadvantage is that the tasks of creating domains and core ideas can become repetitive after the first few cases, and so this format may not make the best use of everyone's time. An advantage of large rotating teams is that larger datasets can be analyzed and more viewpoints represented; a disadvantage is that all team members may not be intimately familiar with all the cases and hence cannot contribute as much to the understanding of the data as a whole. At this point, we suggest that either a set or rotating team composition is acceptable, but we urge researchers to ensure that all team members become deeply immersed in the data, and we suggest that there be at least three members on the primary team to provide a variety of perspectives.

Composition of Teams

Team composition has been varied. Of the 27 studies, 22 used a combination of graduate students and postdoctoral psychologists, 2 used all postdoctoral psychologists, 2 used a combination of postdoctoral psychologists and undergraduates, and 1 used a combination of undergraduates, graduate students, and postdoctoral psychologists. From a perusal of the topics, it appears that undergraduates were used as judges when they had enough maturity or experience to handle the topics (e.g., women's career development; Williams et al., 1998), whereas more experienced people were used as judges for more abstract or difficult topics (e.g., countertransference; Hayes et al., 1998), as suggested by Moras and Hill (1991). At this point, we recommend that the sophistication level of the team members be driven by the topic.

A related concern is the composition of the team in terms of interpersonal power (i.e., whether people with more formal social power, such as faculty members, would unduly influence other team members with less social power, such as students). Our experiences in the United States have been that including people at different power levels has not been a problem as long as the individuals with more designated power do not claim "expert status" and individuals with less designated power are able to express their opinions freely (our

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students have rarely had problems disagreeing with us). Interestingly, however, colleagues using CQR in other countries have told us that attempts to include team members at different levels of power have failed because those at lower power levels feel obliged to defer (e.g., students may feel very uncomfortable disagreeing with professors). Hence, in such hierarchical settings (either in the United States or in other countries), it would behoove researchers to choose team members at the same level of power. Within all teams, of course, power struggles can emerge and need to be discussed openly. Relatedly, we suggest rotating the order of who talks first in team meetings to mitigate the potential influence of dominant team members.

Training

Although only four studies in the corpus described training procedures, we emphasize that training is often necessary for researchers new to CQR. In moving from the domains and core ideas to the cross-analysis, for example, researchers must shift from looking at (to borrow a metaphor) the trees to looking at the forest, a shift that is difficult for many novice CQR researchers. We recommend that trainees study Hill et al. (1997) and the present article and read exemplar studies (Hill et al., 2003; Knox, Hess, Williams, & Hill, 2003; Ladany et al., 1997; Williams et al., 1998) prior to training. If team members are having difficulty grasping and applying the constructs, we recommend consultation with an experienced CQR researcher. Finally, we recommend that authors clearly describe their training procedures in journal articles.

Data Collection

Considerations Related to Samples

Sample composition. Hill et al. (1997) suggested that researchers randomly select from a homogeneous population participants who are very knowledgeable (hopefully having had recent experience) about the phenomenon under investigation. These guidelines generally seem to have been followed, and we continue to recommend them.

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Sample size. Hill et al. (1997) recommended samples of 8–15 participants. Of the 25 studies in the corpus involving individual participants (the other 2 involved focus groups), the range of participants was from 7 to 19. The studies involving fewer participants tended to have more interviews per person and so involved more in-depth data, whereas the studies involving larger sample sizes tended not to include as much data per participant.

When just a few cases are used, results tend not to be stable (i.e., results would fluctuate dramatically if an additional case were added). And of course, the sample size interacts with the homogeneity of the sample, because if just a few cases are used and the sample is heterogeneous, then the results will often not be consistent. Hence, a good reason for using larger samples (i.e., > 12) is that when results are heterogeneous, researchers can subdivide the sample (e.g., into more and less satisfied participants) and yield smaller but more homogenous subgroups. However, we recognize that each additional case requires considerable time to collect, transcribe, and analyze, so we are reluctant to recommend very large sample sizes. Hence, we continue to recommend at least 8–15 participants for studies with one or two interviews per participant, with fewer participants needed when more data are collected or the sample is very homogeneous.

Interviews

In developing the interview protocol, Hill et al. (1997) encouraged researchers to review the literature to determine what has been done before so that they can build on previous research. In contrast, some other qualitative researchers favor limiting exposure to the literature because of the potential for influencing one's thinking. We suggest that having more information does not necessarily limit one's thinking but can allow researchers to focus on what remains to be known and think of new ways to examine old questions. Hence, we still recommend that researchers examine the extant literature to inform the research questions and interview protocols.

Equally important, we recommend that researchers talk with people from the target population (e.g., therapy clients, if the target population is clients) as well as examine their own experiences with

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the phenomenon to develop questions. Researchers should then complete at least two pilot interviews with people from the target population to aid in refining the interview protocol. Doing pilot interviews allows researchers to revise their questions, provides information about the data that are likely to be obtained from each question, and allows for practice using the protocol in the interview setting.

Typically, CQR researchers have developed detailed, semistructured protocols, which involve a number of scripted questions, and then a list of suggested probes to help interviewees explore their experiences more deeply. One problem that has arisen with this approach, however, is that some researchers have included too many scripted questions (in the corpus, researchers asked between 3 and 30 questions, *Mdn* = 12, mode = 15, in a typical hour-long interview) and have not encouraged enough leeway to probe individuals, which leads to "thin" questionnaire-like data rather than a rich understanding of individuals' experiences. Our recommendation, then, is for interviewers to ask only a few scripted questions (i.e., 8–10 questions in 1 hr) to ensure that there is consistent information across participants and ample opportunity for extensive probing. In addition, we recommend that interviewers brainstorm possible probes ahead of time but allow interviewers themselves to spontaneously create follow-up probes to follow the lead of the interviewees and foster thorough exploration.

Yet another issue is how many interviews should be conducted. In the corpus, 15 studies used one interview, and 12 used two interviews. The second interview typically involved a follow-up in which the interviewee was asked about his or her thoughts following the first interview, and the interviewer asked questions to follow up on the first interview. Our experiences indicate that second interviews were often not as productive as hoped. We suggest that second interviews are important to capture further thinking about the topic and can be more productive if interviewers take detailed notes, record thoughts, and review the first interview (transcribing it prior to the second interview can be helpful). If feasible, more than two interviews can be useful to understand many phenomena, especially to assess changes over time.

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Finally, interviewing is often quite difficult for beginning graduate students unless they are very skilled clinically and feel comfortable probing for deep information. Training is often beneficial to help novice interviewers learn to use open questions effectively and to probe for the individual's experience; we also recommend that novice interviewers do several supervised practice interviews. (For further reading about developing and conducting interviews, see Kvale, 1996; McCracken, 1988; Patton, 1990; Polkinghorne, 2005.)

Modality of the Data Collection

In the corpus, 14 studies used taped telephone interviews, 10 used taped face-to-face interviews, two used a paper-and-pencil survey format, and one used an e-mail format. Because the trustworthiness of the study depends on the quality of the data collected, we need to look carefully at these data collection strategies.

Telephone interviews have been criticized for distancing the researcher from the participant, although in our experience, this has not been true with skilled interviewers. Moreover, telephone interviews are sometimes preferable in situations in which interviewees may potentially feel vulnerable or embarrassed, because the telephone format allows for more privacy and confidentiality than do face-to-face interviews. For example, in a study of sexual attraction between therapists and clients, Ladany et al. (1997) suspected that therapists would be more willing to participate in a telephone interview than a face-to-face interview because of the intimacy of the topic and the fact that they could less readily be identified in the relatively small professional psychology community. Likewise, research has shown that participants were more likely to give socially desirable responses in face-to-face interviews than in telephone interviews or questionnaires (Wiseman, 1972). In addition, telephone interviews are often more affordable and feasible than face-to-face interviews.

Another option that Kim, Brenner, Liang, and Asay (2003) used was interviewing via e-mail. Kim et al. argued that Asian Americans would be more apt to respond to questions about family over e-mail than telephone because of the anonymity of e-mail. Face-to-face or telephone interviews would have been antithetical to traditional Asian values because of the risk for participants to lose face. Over each of 10

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weeks, then, Kim and his colleagues e-mailed sets of questions to participants, modifying each set, depending on the responses of the participants, to the past questions. The data seemed just as rich as those of other studies in the corpus, suggesting the viability of the method.

Data Analysis

Data analysis involves three central steps. Domains (i.e., topics used to group or cluster data) are used to segment interview data. Core ideas (i.e., summaries of the data that capture the essence of what was said in fewer words and with greater clarity) are used to abstract the interview data within domains. Finally, a cross-analysis is used to construct common themes across participants (i.e., developing categories that describe the common themes reflected in the core ideas within domains across cases).

Domains

In the corpus, 18 studies began with a "start list" (Miles & Huberman, 1994) of domains derived from the interview questions or literature, which were then applied to the data and modified as necessary (e.g., combined domains that were not distinct, separated domains into multiple domains to better represent the data, or created new domains to reflect unexpected information). In contrast, nine studies reviewed transcripts to develop the domains from the data. Both methods are acceptable, although the latter strategy can be better because it forces researchers to examine the data rather than depend on their preconceived ideas from the interview protocol. If researchers do use a start list, then they should note in the Discussion section how domains changed during the data analysis.

All studies in the corpus used consensus in the domain coding. Typically, the team members independently segmented the data into domains and then came together and worked to consensus on several cases. Once the domain list and coding process had been completed in this way on several cases, the remaining domain coding was often done by pairs of researchers, which seems appropriate to us as a way

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of reducing the repetition involved in this task, as long as other team members and auditors review this work.

Core Ideas

The corpus of studies provided minimal information about how core ideas were constructed. Hopefully, this lack of information indicates that researchers faithfully followed the Hill et al. (1997) guidelines. Our experience in training novice CQR researchers, however, suggests that this step is frequently difficult to learn, given that there is often a tendency to jump to a higher level of abstraction of the data than is warranted at this stage.

Core ideas should remain as close to the data (i.e., the participant's perspective and explicit meaning) as possible, be free of assumptions or interpretations, reduce redundancy, be created independently by researchers with the exact wording and then argued through to consensus. This stage is a process of "editing" the participant's words into a format that is concise, clear, and comparable across cases. Pronouns are changed to be consistent, repetitions are eliminated, and hesitancies and other nonrelevant aspects of interview responses are distilled down to the basic core of what is being said (e.g., "I was very, I mean you know, angry, just very angry at my therapist because of what he kind of did that time, you know what I mean?" becomes "Participant was angry at therapist").

Finally, as with domain coding, the process of developing core ideas can become repetitive after the first few cases. Hence, we recommend that once a common understanding of the core idea process has been achieved (and new people have been trained) in the first several cases, team members rotate, with one person writing the core ideas and the rest of the team reviewing them, in effect serving as internal auditors who edit and challenge the core ideas. We continue to recommend, however, that all primary team members immerse themselves deeply in each case and help edit the core ideas to make them as clear, accurate, and contextually based as possible.

Alternately, we have recently discovered a new way of doing domains and core ideas that seems to enhance the consensus process and result in more valid data. In this method, domains are established

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as before by the team going through several cases. Team members then read each case separately to familiarize themselves with it and identify possible domains for each thought unit. The primary team then meets together to formalize the domain coding and to construct core ideas. To do this, team members read each thought unit out loud so that they have a common understanding of the unit within the context of the case and then work together to make sure they agree about the domains and core ideas. This process allows the team more opportunity to discuss the dynamics of the case and allows for richer and more meaningful data and a more enjoyable process of analyzing data.

Cross-Analysis

In the cross-analysis, we move to a higher level of abstraction in analyzing the data. Hill et al. (1997) suggested that the cross-analysis can be completed either with the primary team generating the categories as a group or with each member doing so individually and then bringing possible categories to the group for discussion. Whatever the approach, all primary team members need to agree on the wording of the categories and the placement of core ideas into the categories. The 27 studies in the corpus retained the fidelity of this method.

In terms of then characterizing the frequency of occurrence of the categories, Hill et al. (1997) suggested that "general" results apply to all cases, "typical" results apply to at least half of the cases, and "variant" results apply to at least two or three, but fewer than half, of the cases. Most studies in the corpus used these frequency labels, although one study used the terms *major* and *minor*, and some defined these labels differently (e.g., the minimum threshold for "typical" categories ranged from at least half to greater than half of the cases, and the minimum threshold for "variant" categories ranged from 1 to 3 cases).

We had considerable debate about these frequency labels. We rejected the suggestion of reporting frequencies or percentages. Frequencies are difficult to compare across samples and studies. Percentages allow researchers to compare across studies but are difficult to evaluate without statistics (i.e., what is a lot vs. a little?). Eventually, we decided to continue to recommend using the labels

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because they allow for comparison across studies and provide a common metric for communicating results. We modified the labels slightly, though, to allow for better description of the data. Hence, we now recommend that *general* include all or all but one of the cases, a modification that allows researchers to talk about findings that are true for almost all of the sample (allowing for one outlier). *Typical* would include *more* than half of the cases up to the cutoff for general (given that half does not seem typical). *Variant* would include at least two cases up to the cutoff for typical. With samples larger than 15, we suggest adding a new category of *rare,* which would include 2–3 cases, to allow more differentiation among categories. Finally, as before, findings emerging from single cases should be placed into a miscellaneous category and not reported in the data analysis.

Another consideration related to frequency labels involves comparing subsamples. When researchers in the corpus compared subsamples within a study (e.g., resolved vs. unresolved misunderstandings), they considered differences between adjacent categories (e.g., typical vs. variant) as evidence for differences between the samples. This procedure is problematic because the lower threshold of one category differs from the upper threshold of the other category by only a single case. Hence, we now recommend that researchers consider as "different" those findings that differ by at least two frequency categories (e.g., general vs. variant).

Once a draft of the cross-analysis has been completed, researchers should revise it to make it as elegant and parsimonious as possible. In addition, researchers need to continually return to the raw data to ensure the accuracy of the placement of core ideas into categories and examine the categories to see whether they can be revised (combine categories or domains, create new categories or domains). We note that we often go through several revisions before settling on a final version—it is typically an evolving process of coming to a greater understanding of the data.

Furthermore, researchers should carefully examine their category structure. A cross-analysis that yields mostly variant categories, for example, may reflect that either the cross-analysis has not been done carefully enough or that the sample was not homogeneous enough (i.e., participants had widely discrepant

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experiences). In the latter case, the sample could be divided if subgroups can be identified and if the sample is large enough to subdivide (e.g., at least seven per group). Otherwise, the researchers should consider collecting more data. Finally, feedback from disinterested people (e.g., colleagues not involved in the study) can be very useful at this point to help make sure that the cross-analysis is clear and makes sense.

Auditing

Hill et al. (1997) suggested that the auditor's role is to check whether the raw material is in the correct domain, that all important material has been faithfully represented in the core ideas, that the wording of the core ideas succinctly captures the essence of the raw data, and that the cross-analysis elegantly and faithfully represents the data. The auditor thus provides detailed feedback at each stage of the analysis process (e.g., creating domains, constructing core ideas, creating the cross-analysis).

Just as the task for primary team members differs between the domains/core ideas and cross-analysis sections of the data analysis, so, too, the task differs for auditors. Auditors need to attend more to editorial work in the former phases, but more to big-picture thinking in the latter phases. In the cross-analysis, auditors need to be familiar with the research questions, domains, and core ideas. Here, the auditor's role is one of questioning and critiquing: Does the organization of the categories make logical and conceptual sense? Is there another way of organizing the categories that better explicates the essence of the data? The auditor must review the cross-analysis with a thoughtful and critical eye, not merely affirming the findings of the team but offering alternative ways of conceptualizing the data.

In the corpus, all 27 studies used at least one auditor, but variations occurred in their number and type. For example, 17 studies used one external auditor (i.e., someone who was not a member of the primary team), four used two external auditors, and six used internal rotating auditors (i.e., people who were members of the primary team). In a few studies, auditors joined the primary team at some point in the data analysis, either at the cross-analysis stage and/or in discussion of the revised cross-analysis/final results. Some

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procedural variation occurred, but the goals of the auditing process seem to have been met.

One concern that became apparent from our review of the corpus is the use of external versus internal auditors. Because of their involvement with other cases, internal auditors may be more aware of the complexity of the data and thus may provide a more integrated and holistic perspective on the data, but their involvement with the data and team members may make them too biased to provide a different perspective. A benefit of external auditors is that they can provide a perspective on the data that is not as influenced by groupthink, a consideration that is particularly important in the cross-analysis stage. We suggest, then, that at least one external auditor be included, especially at the cross-analysis stage, even when rotating teams are used.

We have also noted that the experience level of the auditor is crucial. In the 17 CQR studies using external auditors, all of the auditors had previously participated as primary team members, were experienced CQR researchers, and had expertise related to the phenomenon being studied. Because auditing serves such an important function, we recommend use of an experienced auditor who has a solid understanding of CQR.

An additional concern is how auditors provide feedback to the primary team and what the team does with that feedback. Most feedback in the corpus of CQR studies was given in written format, although auditors occasionally met with the primary team to discuss the written feedback, especially during the cross-analysis stage. From the procedures described in the CQR studies, most teams considered the auditor's feedback by looking for evidence in the transcript for changes suggested by the auditor and then determining whether there was sufficient evidence to incorporate the auditor's recommendations. In five studies involving student theses or dissertations, the team kept resubmitting revisions to the auditor (advisor) until it was clear that the students understood the process. These procedures seem appropriate.

Finally, auditors were often only involved in reviewing the domains, core ideas, and cross-analyses. We suggest that in addition

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to these tasks, auditors should also be involved in reviewing the interview protocol when it is being developed to provide an external perspective for the primary team on the number and depth of questions.

Stability Check

For the stability check, Hill et al. (1997) recommended that after the domains and core ideas were completed for all of the cases, at least two cases be withheld from the initial cross-analysis and then used as a check to determine whether all of the data for these cases fit into the existing categories and whether the designations of general, typical, and variant changed substantially with the addition of the two new cases.

In the corpus, 15 studies included a stability check: 13 withheld the recommended two domained and cored cases, 1 withheld a single-domained and cored case, and another used the original transcripts (domain and core ideas had not been completed) of two cases (although it is hard to imagine how the researchers could test whether the categories developed during the cross-analysis were adequate to fit the data using just transcripts). None of the 15 studies reported substantial changes in the cross-analysis because of the stability check. These data suggest that the stability check served as little more than a confirmation of the extant categories in those studies that included this step. Given our experience and the way in which CQR data are typically collected (most stability checks are done a year or two after the data have been collected), it is unlikely that researchers will go back to collect more data, even if the stability check raises cause for concern. It could also be problematic to collect new data at this point because such data may be different from the original data, given the new perspectives gained through the data analysis. We suggest, then, that the stability check is not necessary but stress even more that researchers should collect an adequate sample and should present evidence of their trustworthiness in conducting the data analyses (through providing quotes or core ideas, extended examples, and documentation of procedures) so that readers can confirm their findings.

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Charting the Results

Hill et al. (1997) recommended charting the results to depict visually the relationships among categories across domains, particularly for data representing sequences of events (e.g., the process of resolving a misunderstanding). They suggested a criterion of at least three cases to establish each connection between domains in the pathway. Of the 27 studies in the corpus, only 4 reported attempts to chart their results. Of these 4, only 2 studies, both examining an identifiable sequence of events (e.g., Hayes et al., 1998, investigated the origins, triggers, and manifestations of countertransference), yielded charts that were useful and thus were included in the final articles.

Although most CQR researchers have not found charting to be relevant or valuable, we encourage researchers to consider the benefits of visually representing their data in some way. Researchers could chart the results, as suggested above, to illuminate empirically based pathways between those categories across general and typical domains, or they could create "webs" or organizational diagrams to depict the interrelationship among categories. Using some visual representation is an efficient means of presenting the findings (i.e., charts can convey a lot of information in a small space) and also enhances the richness of the report because results appear appropriately connected rather than disembodied.

Establishing the Trustworthiness and Accuracy of the Data

One final consideration is the use of participants to help assess the accuracy and trustworthiness of the data, sometimes called "member checking" (Lincoln & Guba, 1985). Of the 27 CQR studies reviewed, 3 studies mentioned that they mailed the initial transcripts of the interview to the participants as a check for accuracy, and 7 studies mentioned that they sent a draft of the final results for participants to review and provide comments and suggestions to the team. Because few studies completed this step (or at least indicated that they did so), because participants rarely provided any feedback in those studies that did include it, and because feedback may be difficult

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to interpret (e.g., the final draft of the results describes the typical response in each domain, and thus all of the results may not fit for any given participant), we question the utility of including this step in the way that it has been done as a means of establishing the accuracy and trustworthiness of the data. More effort to elicit participant feedback is encouraged, however, including such possibilities as using focus groups with participants once the researchers have a draft of the results. In addition, it is always a good idea to provide participants with a copy of the final article as a way of thanking them for participating and informing them about the findings.

Providing evidence about the trustworthiness of the data analysis and accuracy of qualitative findings remains a challenge. We suggest that this area should be a major creative focus for qualitative researchers (Morrow, 2005).

Writing Up the Results and Discussion Sections

Because there is so much data in a qualitative study, the Results and Discussion sections of a CQR study are often difficult to write. The most typical problems we have encountered are that the Results and Discussion sections are repetitive, the results do not come to life, and categories are not clearly described or distinguished from one another.

The main purpose of the Results section is to communicate the results clearly and cogently to the audience. According to Hill et al. (1997), the "results and conclusions of the data analysis need to be logical, account for all the data, answer the research questions and make sense to the outside reader" (p. 558). In the corpus, some researchers organized the findings according to their domains and categories, some according to main groupings or clusters of the data, and some according to research questions. In addition, 13 presented core ideas, nine used participant quotes, and five used a combination of core ideas and quotes to exemplify the categories and subcategories either in the text or in tables. Either quotes or core ideas seem appropriate to us, as long as the researchers are able to illustrate the results adequately.

Furthermore, some studies presented all of the findings in the text, whereas others presented all of the data in a table but only

narratively described the results for the general or typical categories (e.g., Hill et al., 2003). Our recommendation is to fully and richly describe at least the general and typical categories and provide at least one example (using the core ideas or quotes) to illustrate each category in the text. Unless important for some reason, variant or rare data can be left in a table so that the Results section is not cluttered with too much information.

Of the 27 studies in the corpus, 11 also presented case-length examples to provide a contextually richer description of how the phenomenon operated across domains. Such examples were included most often when two groups were being compared (e.g., problematic vs. unproblematic events). Some have also used a composite example (e.g., Williams et al., 1998) that combines results across cases to provide a narrative sense of the average participant without revealing confidential material about any single participant. We highly recommend the use of such illustrative case examples because they help integrate the results and provide a rich picture of the phenomenon (see Ladany et al., 1997, for a good example).

Furthermore, we note from our personal experiences that researchers sometimes do not include all of the collected data in their final write-up. Some information is trivial or does not add to the story that is developed in the article. In addition, sometimes there are questions for which not enough data were collected from all the participants. Authors do not need to report all of their data, but they should note in their article whether data were collected but not reported.

In Discussion sections, a typical problem we found is that authors simply repeated the results. We recommend that authors use the Discussion section to highlight the most important findings, relate the results back to the literature, and pull the results together in some meaningful way, perhaps by beginning to develop theory to make sense of the data. Although difficult, theory development is crucial in leading to the advancement of our discipline (see Schlosser, Knox, Moskovitz, & Hill, 2003, for a good example).

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Conclusions

After having conducted a review of the 27 studies that used CQR, we conclude that CQR is a viable qualitative method. Most studies have applied CQR relatively faithfully, but we have noted a number of things that could be modified to streamline the method (see Table 1).

For people deciding whether or not to use CQR, we can present several advantages and disadvantages that have become clearer to us after having conducted this review. We believe that CQR is ideal for conducting in-depth studies of the inner experiences of individuals. It is also especially good for studying events that are hidden from public view, are infrequent, occur at varying time periods, have not been studied previously, or for which no measures have been created. CQR is ideal because it involves a rigorous method that allows several researchers to examine data and come to consensus about their meaning, thus reducing the biases inherent with just one person analyzing the data. This method can also be freeing for researchers used to other methodologies because it makes maximum use of the clinical wisdom of judges. Some of the limitations of CQR involve the time commitment, the repetitiousness of some of the tasks, the lack of precise guidelines for some of the steps (e.g., When have you collected enough cases? How exactly do you come to consensus?), and the difficulty of combining findings across studies (i.e., it would not be possible to do a meta-analysis on qualitative findings). We do not claim by any means that CQR is the only or best qualitative method. Rather, we hope that explicating the method more thoroughly will allow researchers to use it faithfully and ultimately help us develop even better methodologies.

Finally, because almost no empirical research has been conducted on qualitative methods, we have several recommendations. First, we need to investigate the consensus process, perhaps using the same data set but different teams (i.e., would two separate teams arrive at the same results?). Furthermore, a more experimental design could be used to assess the consensus process (e.g., one team could try to minimize intergroup conflict, whereas another team could try to

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maximize differences). Second, we need to study different types of teams (i.e., the process of set vs. rotating teams). Third, a CQR study of new CQR researchers may enlighten us about the experience of doing CQR. We also need to examine the effects of interviewers, data collection methods (e.g., telephone vs. face-to-face interviews), topics that involve dearly held beliefs versus topics about which one can be dispassionate, and different methods of training researchers. Clearly, more research is needed on CQR, and we encourage others to help us refine this method.

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Appendix

Table 1 Recommendations for Using CQR

Consideration	Recommendation
Consensus process	1. Researchers should openly discuss their feelings and disagreements. 2. When there are disagreements among the researchers about the interviews, everyone should listen to the tape of the interview.
Biases	1. Report demographics and feelings/reactions to topic in the Methods section. 2. Discuss the influence of biases in the Limitations section. 3. Openly discuss biases among the research team throughout the process. 4. Journal reviewers need to be aware that biases are a natural part of any research, including CQR.
The research team	1. Either set or rotating primary teams are acceptable. 2. All team members must become deeply immersed in all of the data. 3. At least 3 people should comprise the primary team. 4. The educational level of team members should match the abstractness of the topic. 5. Team members with more designated power should not claim "expert status." 6. Power issues should be addressed openly. 7. Rotate the order of who talks first to reduce undue influence.
Training team members	1. Prior to training, read Hill et al. (1997), the present article, and exemplar studies. 2. Consult with an expert if having difficulty learning the method. 3. Describe training procedures in the Methods section.
Sample	1. Randomly select participants from a carefully identified homogeneous population. 2. Choose participants who are very knowledgeable about the phenomenon. 3. Recruit 8 to 15 participants if 1 to 2 interviews are used.
Interviews	1. Review the literature and talk to experts to develop the interview protocol. 2. Include about 8–10 scripted open-ended questions per hour. 3. Allow for follow-up probes to learn more about the individual's experience. 4. Conduct several pilot interviews to aid in revising the interview protocol. 5. Train new interviewers. 6. Ideally, each interviewee should be interviewed at least twice.
Data collection	1. Match the data collection format to the data desired and the needs of the study. 2. Record reactions to interviews; review tape before subsequent interviews.
Domains	1. Develop the domains from the transcripts or a "start list." 2. The entire primary team codes the data into domains in the first several cases; the remaining coding can be done by 1 researcher and reviewed by the team.
Core ideas	1. Use the participant's words; avoid interpretive analysis. 2. The entire primary team develops the core ideas for the first several cases; the remaining core ideas can be done by 1 researcher and reviewed by the team, or the entire primary team can work together to code the domains and construct the core ideas.
Cross-analysis	1. Use frequency labels to characterize data: *General* applies to all or all but 1 case; *typical* applies to more than half up to the cutoff for general; *variant* applies to 2 cases up to the cutoff for typical. When more than 15 cases are included, *rare* applies to 2–3 cases. Findings applying to single cases are placed in a miscellaneous category and not included in results/tables. 2. When comparing subsamples, results are *different* if they vary by at least 2 frequency categories (e.g., general vs. variant). 3. Continually refer to the raw data in making interpretations. 4. Continue revising the cross-analyses until elegant and parsimonious. 5. If there are mostly variant or rare categories or a lot of miscellaneous items, revise the cross-analysis (e.g., combine categories, subdivide the sample, or collect more data). 6. Get feedback from others about the cross-analysis.
Auditing	1. Either internal or external auditors are appropriate for the domains and core ideas, but at least 1 external auditor is desirable for the cross-analysis. 2. For inexperienced researchers, it is helpful for the auditor to examine revisions until he or she is confident that the data are characterized accurately. 3. Auditors should also be involved in reviewing the interview protocol.
Stability check	The stability check (i.e., holding out 2 cases from the initial cross-analysis), as proposed by Hill et al. (1997), can be eliminated, but other evidence of trustworthiness should be presented.
Charting the results	Charting or other visual approaches for depicting findings (e.g., "webs" or organizational diagrams of categories) could be helpful.
Writing the Results and Discussion section	1. At least the general and typical categories should be fully described in the Results section, although all categories in the cross-analysis should be included in a table. 2. Either quotes or core ideas can be used to illustrate the results. 3. Case examples are useful for illustrating results across domains. 4. In the Discussion section, pull together results in a meaningful way and develop theory.
Participant's review	Give transcripts of interviews and write-up of results to participants.

Note. CQR = consensual qualitative research.