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Interprofessional Qualitative Research Teams: The Experience of Stroke for Rural Individuals

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Abstract

This case study describes our experiences and perceptions of completing a qualitative study with a seven-person interprofessional team. We describe and highlight issues using examples from our work examining the experiences of individuals with stroke and caregivers living in rural Appalachian Kentucky. Components of the "method" in action that we address include team formation and leadership, regular team meetings and discussions, developing an interview guide, recruitment, conducting interviews, managing the data, dividing the labor and responsibilities, analyzing, and disseminating the findings as a team. We share practical lessons learned, including benefits, limitations, and strategies.

Learning Outcomes

By the end of this case students should be able to

- Recognize the influence of an interprofessional team on conducting qualitative research
- Identify pros and cons to conducting interprofessional team qualitative research
- Discuss potential strategies for facilitating successful interprofessional team qualitative research

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Project Overview and Context

As part of a grant funded by the National Center on Minority Health and Health Disparities (No. 1RC4MD005760) supporting the Kentucky Appalachian Rural Rehabilitation Network (KARRN; http://www.karrn.org), a team was formed to study the supports and barriers to health care and community integration for people with stroke and caregivers who live in rural Appalachian communities. This needs assessment was a crucial first step to begin to improve supports and remove barriers for people living with stroke in rural regions, especially in rural Kentucky.

As a seven-person interprofessional research team, we conducted this qualitative descriptive study looking at the experience of stroke for survivors and caregivers living in rural Appalachian Kentucky. In qualitative methods, it is more common for a single person or perhaps a pair of researchers to conduct a study. It is much less common for a group of people, a "team," to work together to conduct a study, perhaps because of the intricacies of coordinating the process associated with multiple diverse professionals. In this case study, we will provide an overview of one such research process.

In this case, we will discuss the process and the pros and cons to team-based qualitative research. Not only were we using a team, we were using an interprofessional team. As we will

discuss in this chapter, this added another layer of complexity to the project, but again provided many benefits. We defined “interprofessional team” as multiple members from different disciplines working collaboratively for a shared broader vision, with an understanding of each other’s roles and an appreciation for the differences and similarities brought to the discussion by team members.

The aim of the research project was to describe the experience of stroke for survivors and caregivers living in rural Appalachian Kentucky. Individuals in this region are underserved medically and in terms of rehabilitation. Appalachian Kentucky is designated a medically underserved area due to the shortage of primary care and specialist care (http://chfs.ky.gov/dph/info/dpqi/HPSA.htm). They face health disparities and are at increased risk of negative health outcomes and a poor quality of life. Appalachian Kentucky residents have a higher incidence of diabetes, heart disease, cancer, stroke, kidney disease, and respiratory disease than the general U.S. population (Centers for Disease Control [CDC], 2013). A secondary analysis of the data from this study aimed to examine the participants’ experiences of receiving education from health care providers.

As we present this case study, we are using the following definition for team qualitative research: a method in which more than one researcher collaborate in study design, data collection, analysis, writing, and dissemination of findings. Team qualitative research has grown, particularly because the value of a multidisciplinary perspective is not only recognized but also required by many funding agencies. In the realm of rehabilitation, where interprofessional teams are the gold standard in terms of service provision, it is accepted that interprofessional research teams are beneficial. The rising prevalence of teams conducting qualitative research has resulted in calls for critical reflection of the practice (Cheek, 2008).

In the qualitative research context, we recognized the challenge of team implementation in the design and conducting of research and the difference between this approach and the parallel individual processes more characteristic of multidisciplinary teams. In this case study, we will describe practical considerations for interprofessional teams as a methodological tool in qualitative research, including our perceived benefits, limitations, and strategies.

Research Design

A qualitative descriptive research design was used by the seven-person interprofessional team. Qualitative descriptive methodology is used to provide a comprehensive summarization of specific events experienced by individuals. This is in contrast to other qualitative methodology such as grounded theory where the goal is to develop an overarching theory rather than

reporting a comprehensive summary of events (Sandelowski, 2000).

We conducted semi-structured interviews with a total of 13 stroke survivors and 12 caregivers. Semi-structured interviews generally include open-ended, guiding questions that allow for a great deal of variety in interviews as well as a good deal of time allotted for each interview (e.g., 1-2 hr). We conducted the interviews with people with stroke and/or caregivers, and in some cases, they were interviewed together in pairs. The decision to take part in individual or paired interviews was up to the participants.

As we conducted interviews, we also collected demographic data to better characterize our participants. We also wrote field notes during the interviews to highlight important ideas that came up during interviews and dictated reflective memos after finishing the interview to ensure first impressions and ideas were not forgotten. The combination of direct interview information (quotes), field notes, and memos are techniques to enhance credibility of the study findings. These techniques allow for meticulous record keeping, a clear decision trail by interviewers, and rich description from the participants, and they combine to strengthen the findings of the study (Noble & Smith, 2015). Finally, after the interviews were completed, we used qualitative content analysis to analyze the data that we will discuss below.

Method in Action

Developing Our Team

The team development began with the co-principal investigator of the grant that was funding the study. She is a university faculty member who was responsible for conducting this portion of the grant activities. As a faculty member, her interest was two pronged: conduct the research and allow for the education and training of graduate students with whom she worked. Thoughtful reflection by the team leader centered around the following questions and contributed positively to the formation of our team:

- What is the appropriate approach for the team to effectively address the question?
- Will this project benefit from utilizing a team approach and why?
- If a team is beneficial, who should its members be and why?

Interprofessional rehabilitation teams are the gold standard when it comes to achieving the best rehabilitation outcomes post-stroke. Therefore, the team leader hypothesized that examining the experiences of people with stroke from multiple disciplinary lenses would be valuable to translating research findings into clinical practice. It was also important for our team to include professionals who had worked closely with people with stroke from rural regions. A certain level

of background knowledge and familiarity with people with stroke and people who live in rural Appalachia was needed. Fortunately, the KARRN network was already linked, through monthly meetings, and professionals with a primary concern for and focus in rural Appalachia could be drawn from this group.

The team leader invited diverse professionals with varied levels of experience to be on our team. The interprofessional component of the team was geared to represent common members of a stroke rehabilitation team. This included one nurse, two speech language pathologists (SLPs), three physical therapists (PTs), and one occupational therapist (OT). In terms of expertise, three of the team members had extensive experience in research as a whole and qualitative research specifically, whereas three of the members were doctoral students (but experienced clinicians) who were in the initial stages of developing their research expertise. Two of the members were faculty at a large research university, three were students at that university, and two of the members were working in different health care facilities but both had PhDs.

Once the team members were chosen, it was clear to us that the first step to developing a cohesive and effective team was to spend time on team building and education. As our team members were from varied disciplines with varying expertise in qualitative research, we decided to use education as a team building strategy for the preliminary focus. The leader determined that a style that was organized but adaptable would be essential to allow for open communication, growth of members' knowledge and expertise, and progression toward the objectives of the research. As this was the first team qualitative project any of us had taken part in, it was unclear what challenges we would face, so staying open to changes (e.g., the need to change directions and plans) seemed important while keeping our whole team engaged, focused, and motivated.

Regular Team Meetings and Discussions

Communication was the essential element in developing and maintaining the integrity and work flow of our team. Weekly team meetings with a regular time and location were scheduled, and an outline draft of the first 6 months of meetings was developed and agreed upon by all team members. In our early meetings, the goal was to gain an understanding of our strengths and weaknesses in terms of qualitative research, knowledge of rural health, and the impact of stroke. One of the ground rules set was that all of us were valued equally; insight and clarity about one's own strengths and weaknesses were encouraged. The meetings took place in person, but allowed for teleconferencing for the one health care facility team member who was not located in the same town as the university.

As a team, we started from the beginning in terms of education. For example, as we intended to have more than one person interview participants, it was important for the experienced qualitative researchers to share their experiences, techniques, and tricks of the trade with the less experienced members. We wanted to explore topics such as what resources to share, how involved should we get in an individual's life or story, and how to handle the inevitably strong emotions that we would likely hear when talking to our participants.

As a first step for team education, we decided to create a journal club (for team members) in conjunction with the meetings focused on process and research development. The goal of this step in team development was threefold: (a) to focus on the next step in project development, (b) to educate everyone about the evidence for standards of care for people with stroke, and (c) to educate everyone about development and implementation of qualitative research. Our meetings occurred weekly for the first 2 months of working together. The educational components of our journal club meetings included the following:

- *Meeting 1*: (a) Review and revision of project objectives and institutional review board documents (preliminary work completed by project leader), (b) preliminary review and revision of the interview guide, and (c) review of articles related to evidence-based guidelines for care of people with stroke (led by two team members well versed in this literature).
- *Meeting 2*: Finalizing recruitment strategies such as flyer development, letters for recruitment, and identification of resources (e.g., local inpatient rehabilitation facility) for helping with recruitment. We knew recruitment would be challenging and timely and needed to begin as soon as possible.
- *Meetings 3 to 6*: Review of the literature on qualitative research, focusing on design development, conducting of interviews, and analysis. Two different people were assigned each week to facilitate the discussion of the articles chosen on these topics, although everyone was expected to read all of the articles. The interview guide continued to evolve in response to the growth of our understanding of qualitative research.

One member of the team had experience in teaching courses in qualitative research and was able to quickly organize a flow of articles related to qualitative methods, analysis, ethical issues, tips, and common pitfalls. We discussed studies and methodological papers related to qualitative research until each member shared a basic understanding of why we were using this methodology, what it can accomplish, how the project would evolve, and expectations of what was required to complete the project. These article reviews allowed all of us to speak a similar language in terms of qualitative research.

Regular team meetings also allowed for a way for us to socialize, creating an open, collegial, and professional environment. This foundation provided the security for each of us to feel comfortable to offer ideas, questions, and interpretations, and it allowed the leader to gauge who could and would conduct interviews. Having us accustomed to regular meetings also prepared us for the extensive meetings that took place once the study was underway, particularly during the analysis phase of the project. The importance of clear and effective communication for our team development and function cannot be underscored enough.

Development of the Interview Guide

Being an interprofessional team allowed for a wide variety of interests and points of view to be involved in the development of the interview guide. The point of view from each profession was considered in creation of the questions. We refined the guide through a series of team meetings and pilot testing. Our investment of time in developing the guide from the onset, collaboratively, promoted a shared understanding of the research and questions and allowed for the richness of our different backgrounds to enhance the question development. Examples of interview guide questions with prompts are in Table 1.

Table 1. Sample interview guide questions and prompts.

Question	Sample prompts
1. Please describe your experience of having the stroke.	How did you get to the hospital? Were you treated in your local community? Did the providers explain what was occurring in a way you could understand? If you wanted your family included, did the medical team include them?
2. What rehabilitation did you have?	What was the most important thing that occurred for you during inpatient rehabilitation? Describe the communication from your therapists (such as physical, occupational, speech).
3. How were the transitions between	How was the discharge process? What challenges did you run into?

each location of care and back to home?	Please tell us about the things that occurred that you did not expect and how you handled them.

Recruitment

Recruitment is always one of the make or break aspects of research. Having an interprofessional team with clinical, academic, and community-based members allowed for a wide breadth for recruitment. This was a very important strength of our team. We were able to have access to multiple hospital populations as well as have outreach through our community-based network KARRN.

Interviews

Due to availability and to provide opportunity for growth for the doctoral students, three team members served as interviewers. Two had conducted qualitative interviews previously; the third individual had not and therefore conducted pilot interviews with another experienced researcher on the team before starting on the main project. Each interviewer was ultimately able to ask probing questions in the interview that explored beyond the individual's expertise and personal interests because of the team building work and collaborative creation of the interview guide prior to the interviews. For example, the interviewer who was an SLP was comfortable asking about falls issues with participants, and one of the PT interviewers was able to delve into aspects of aphasia in an interview.

Although the shared language of the team allowed for crossing professional boundaries, we had the additional benefit of being able to capitalize on the expertise and strengths of individual rehabilitative professionals when needed. For example, the SLP was intentionally matched with participants with stroke who had aphasia and significant communication impairments. Her clinical expertise facilitated meaningful interviews in these situations.

The participants expressed an appreciation to us for traveling to their home communities, for the opportunity to share their stories, and for knowing that someone cared enough about their stories to make the effort. They sincerely hoped that their words would make a difference and help others in their situation as well as enable health care providers to be better equipped to help.

Data Management

Managing the hundreds of pages of data that are collected in in-depth qualitative interviews can be daunting for all qualitative researchers. Adding multiple team members and multiple

interviewers added a layer of complexity that again relied on strong leadership from the team leader. Developing a system for sharing recorders, collecting and downloading digital recordings, storing the transcriptions, and eventually redistributing the transcripts for paired data analysis took strong organizational skills and monitoring.

Division of Labor and Responsibilities

A benefit of being part of a team is that having more than one person conducting interviews meant we were finished faster than is possible with only one interviewer. Our participants lived in 10 counties across Appalachian Kentucky. The geographical challenges of traveling to each participant were lessened by having three interviewers.

Another benefit of being a team included that ability to take part even if one could not participate in each step of the project. Each of us did not take part in the interviews. Those who were able to devote the needed time to conduct interviews, often with participants who lived long distances away, did so. The flexibility of being able to pull certain team members to the forefront at different times in the project was very useful. We worked together during the project set up and the team building time of the project. A subset of team members conducted the interviews. All of us worked on analysis.

Analysis

All interviews and reflections were recorded and then transcribed verbatim by a paid transcriptionist. To analyze the transcripts, a new timeline was developed by the team leader that involved weekly team meetings, once again. We divided into pairs (one experienced, one less experienced) to begin data analysis. The use of two people to analyze each transcript helped to ensure reliability and validity, and each pair would come to the weekly meetings and compare and contrast the analysis as it was conducted. As the analysis moved from initial coding to axial coding and ultimately theme generation, the team moved back and forth from pairs to the full group.

Our expectations for analysis were that everyone on the team contributed to the process, and decisions were made by consensus. Frequent communication, verification with members, and patience were critical to the process. We realized quickly that given the extensive scope of the project (the experience of stroke for the participants), theories and frameworks would be helpful to initially think about the data. The use of established theories and frameworks can be used in qualitative work as a way to organize the large amount of data collected. This is particularly true of Qualitative Descriptive methodology in which new theory generation is not a goal.

As a team, we began to look at incorporating Self-determination Theory, the Social Ecological

Model, and aspects of theories related to social support in initially looking at and talking about the data. Self-determination Theory uses the concepts of autonomy, relatedness, and competence (ability) to define individual characteristics that are integrated to facilitate or hinder the individual as he or she attempts to engage in the social environment (Ryan & Deci, 2000). The exploration of supports and barriers for people with stroke in Appalachian Kentucky in terms of these individual characteristics was very useful as an organizing schema in examining each individual.

The Social Ecological Model allowed us to look at the data collected in terms of the dynamic interrelations among various personal and environmental factors (Bronfenbrenner, 1979). This includes looking at how individuals, their personal relationships, their community, and the social institutions surrounding them influenced their experiences of stroke living in Appalachian Kentucky. For example, some of our participants had very strong family relationships and community programs that assisted with things such as home adaptations and providing respite care. These relationships and community organizations positively supported participants' abilities to reintegrate into their lives and communities. In contrast, some participants experienced barriers to reintegration. For example, one participant described the challenge of gaining meaningful employment based on the stigma associated with physical disabilities expressed by those in his local community.

Finally, using the concepts surrounding theories of social support such as emotional, appraisal, information, instrumental, and environmental supports helped to organize our data (Cooper, 2004). Social support is important in terms of social relationships and how they help or hinder a person. A brief example of our analysis using social support concepts for one participant is given in Table 2.

Table 2. Types of support with sample of associated analysis.

Type of support	Definition of support	Sample analysis
Emotional	Generally comes from family and close friends. Includes empathy, concern, caring, love, and trust	Intelligent, caring, and resourceful spouse of 20+ years, adult child at home; describes extensive family support; no connection to faith communities but reports he would like this
	Includes advice, suggestions, or	Receives this from family only; describes

Informational	directives to assist the person to respond to personal or situational demands	need for more and regular communication with health care providers and effective health promotion information
Instrumental	Money, time, in-kind assistance, and other explicit interventions on the person's behalf	Lacking in all respects
Appraisal	Transmission of information in the form of affirmation, feedback, and social comparison; from family, friends, co-workers, or community members	Only has spouse, son, and family to talk to; potential need for more peer contact, support group, and respectful role in community to have appraisal support
Environmental	Access, the built environment, transportation, culture, geography	His brother adapted his home that he lived in for the first year post-stroke but they have now since had to move; lives in a two-story apartment with accessibility issues

We completed qualitative content analysis using both pre-determined and data-derived coding. Each of us individually analyzed the first three interviews. We then met and developed an initial coding scheme that encompassed each member's findings. Due to the quantity of data and the differing levels of expertise, it was decided that team members would work as pairs as data analysis began. Pairs for the following interviews completed dual coding and the pairs reached consensus regarding data interpretation of their interviews. We again came together as a group and compared and contrasted our findings/codes, negotiating further the evolution and refinement of the coding and analysis.

Once all of the interviews were coded and we were in agreement that the coding scheme was accurate and being followed, the actual interviewers for each interview were asked to review the analysis to ensure that those who had actually been there and spoken to the participants agreed that the analysis was reflective of what they experienced when conducting the interviews. Finally, to ensure that the findings were cohesive and in one voice, a single team member synthesized findings from the team. This was helpful in that one person was able to pool the findings from each member into a cohesive narrative. We all reviewed these summative findings and reached consensus on a final draft of the findings.

Our team approach to analysis yielded a descriptive summary of our 25 participants' experience of stroke in rural Appalachia. We divided their story into the following chronological approach: stroke onset, transitioning through the health care continuum, and reintegrating into their lives and rural communities. In sharing their experiences, supported by verbatim quotations, we hoped to bring awareness to health care providers and community leaders with the goals of improving services, positively supporting community reintegration, and improving the quality of life of those with stroke and their caregivers. There was a clear need for the development of resources such as support groups and local health navigators to assist individuals with accessing information and services. We also closely examined the practice of patient and caregiver education in an effort to improve what, when, and how information is provided.

Dissemination

Being an interprofessional team was beneficial when it came to dissemination of the project. Due to our different backgrounds (nursing, occupational therapy, physical therapy, speech language pathology), we had a wide variety of venues to publish and present and a number of people willing to contribute to the work. Although multiple team voices during design, data collection, and analysis were valuable, this was viewed as more challenging when it came to writing. Someone had to take the lead. This was important in moving the work forward. Instead of parsing out sections of the papers to each team member to complete in isolation, the lead author, who was incidentally not the team leader, initially drafted both papers while integrating feedback, edits, and writing contributions from the team. Although an individual member took the lead, this approach resulted in papers that reflected the collective perspectives and interpretations of the team.

For students, the team methodology was very beneficial. They were able to take part in a larger study with higher impact findings than they would have been able to do on their own at that stage in their training. It provided a way for the students to gain experience and benefit from participation in creating publications and local, state, national, and international presentations. Dissemination is an area where conflict can arise among teams. There can be miscommunication or different goals that emerge. The fact that we had no conflict in the area of dissemination is a testament to the time devoted to the cohesive, supportive development of our team identity.

Where to publish, what to publish, and how best to accurately describe the team component of the methodology were considered as we focused on dissemination. We decided that the overarching paper (describing the overall experience of stroke) was a priority, and this was published in 2013. The lead author, one of the PhD students on the team, also led the writing

on the education-related paper as this work contributed to her dissertation. This was published in 2016.

The process of submitting, resubmitting, and revisions was a labor of love and pain for all the team members. The support and encouragement of the team through this experience were the key to successfully publishing. To date, findings from this research have been disseminated through the two articles described above, and two international, three national, and four regional presentations.

Practical Lessons Learned

Conducting qualitative research with an interprofessional team can be extremely fruitful, but can also have some limitations. The first and foremost limitation is the time required to conduct the project. The team methodology will increase the time required to get the project up and running and the length of time to complete the study. If time is not an issue, the pros of the team experience are many. The richness of multiple people from multiple backgrounds and training comes through from interview guide development, through conducting interviews, analyzing data, and ultimately disseminating the information through publications and presentations. The variety of skill sets each member brought to the team was invaluable.

Communication was the key to the team experience. Only through remaining organized and communicating clearly and frequently were we able to develop a strong team, keep it together, and conduct the study with rigor. A component of remaining organized was keeping a record of the team approach. As examples, research team meeting minutes and decisions made were recorded. This was especially helpful when it came time to write the methods sections of the articles.

Taking the time at the beginning to develop a true shared collaboration and to place each member as an equal colleague was crucial. If that step was not fully completed, the success of the project is in doubt. At the very least, the chance of losing team members as time went along is high. Our team stuck together throughout this fairly long process. Our relationship strengthened throughout the process. There is definitely potential for conflict to arise in a team setting if things are not handled well. Having a strong, fair team leader who did not have a problem delegating and allowing each team member to contribute was very helpful in keeping the relationships positive.

A potential con to a team approach includes the potential during analysis of allowing for varied bias and confusion. Our team did in fact struggle at the beginning of analysis. We had to negotiate what would work and what did not work. We moved from paired to group and back at

different times to work around times we seemed to be getting stuck. Multiple points of view, however, required all of us to step back from our preconceived notions as we began analysis and required flexibility and openness from each member. We had to honestly attempt to see the data in ways that may not have felt natural to any one individual. Ultimately, if time is not pressing and there is strong leadership, the team approach benefits far outweigh the negatives.

Conclusion

Qualitative inquiry is recognized as a valuable approach in research methodologies. The use of teams in qualitative research is growing. Team-based research should be considered a methodological tool that is intentionally chosen, with a clear understanding of the benefits, limitations, and challenges. Strategies to facilitate success can be incorporated throughout the process. Experiences shared in this case study may provide a useful springboard to novice researchers wishing to utilize this methodology.

Exercises and Discussion Questions

1. What are the potential benefits to conducting an interprofessional qualitative team project?
2. What are the potential stumbling blocks to conducting an interprofessional qualitative team project?
3. What are important factors that support an interprofessional team to function well?
4. Take a sample of qualitative data such as an excerpt from a transcribed interview. Partner with a classmate. Analyze the interview individually and then discuss the findings. What were the points of agreement? What were the points of disagreement? What would the final analysis look like based on a dual coding and interpretation of the data?
5. Identify your research question. Make a case for using an interprofessional team for the qualitative study to investigate the question. Make a case for not using an interprofessional team. Discuss with a classmate and determine which case is stronger.

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Web Resources

Robert Wood Johnson Foundation Qualitative Research Guidelines Project (http://www.qualres.org/). Regarding investigators and teams:

http://www.qualres.org/HomeInve-3940.html

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