Refining Your Qualitative Approach in Healthcare Simulation Research

11

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Overview

A knowledge of potential research approaches is foundational to the execution of acceptable scholarship within the qualitative domain. The presence or absence of an adequately defined theory based approach within the research can lead to divergent outcomes (i.e. rejection versus acceptance) in publishable academic writing. Therefore, the selection of a quality approach and its subsequent integration throughout the fabric of a research endeavor is critical to the success of any qualitative research process. This process naturally applies to simulation research in its many dimensions. In this chapter, we introduce various theoretical and conceptual perspectives to generate further understanding and preparation for qualitative research. Exploration of a few qualitative research approaches will be presented. The process used to select the qualitative approach will be discussed with a view toward how such an approach can be integrated into a qualitative research study.

Practice Points

- Theoretical and conceptual approaches differ, with theoretical approaches functioning at a higher level of abstraction than conceptual approaches.
- The theoretical and/or conceptual approach will have a profound influence on how the study is structured and conducted.
- Four core constructs, the *problem, purpose, significance* and *research question(s)*, should be considered when choosing an approach.
- The final theoretical and/or conceptual approach must be congruent with the researcher's own worldview.

The Essence of Theoretical and Conceptual Approaches

Understanding the essence of the theoretical or conceptual approaches is essential when researchers venture into the world of qualitative research. Many novice researchers, however, are uncertain as to how a ***conceptual*** and ***theoretical*** approach is selected. What are the differences between approaches and, more importantly, how are they used? These terms are often used interchangeably and have been debated in the research literature [1–4]. However, from our view (and for the purposes of this chapter) these terms will ***not*** be treated as identical. The essence of a theoretical approach, or what on occasion is described as a 'framework' in the research literature, is that it is based on a *pre-existing* conjectural foundation that has been determined and validated in the scholarly realm. Conceptual approaches, on the other hand, are more particular, and are established with regard to how the researcher actually frames the exploration of the research question [5, 6]. Thus, they have direct bearing on how the research problem is determined and grounded within the phenomenon that is being explored [5, 6]. Table 11.1 further distinguishes these two approaches. As can be seen from the examples within the table, theoretical approaches are typically more general, and address the more fundamental ideas within which a study belongs. Conversely, a conceptual approach is based on more specific concepts or variables within the research study. The theoretical approach is often considered a more 'formal and higher' level of abstraction than the 'lower' level conceptual approach.

The term 'framing' (as used above within the word 'framework') refers to how the researcher interprets the research findings and connects them to other knowledge. It is important to remember, however, that qualitative research generally does not use pre-defined theoretical 'frameworks' as does quantitative research. Instead, qualitative research is about ***uncovering*** the approach by which the data can best be understood through the research process itself. Thus, theo-

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Table 11.1 Distinguishing theoretical & conceptual approaches in simulation research

Theoretical approach	Conceptual approach
Symbolic Interactionism [7] • A down to earth scientific approach to studying human group life and human conduct • Example: Study of research participants in a simulation teaching and learning environment, including but are not limited to, the use of symbols, words, gestures or interpretations to convey meaning [7, 8]	• Exploration of the theoretical teaching/learning and/or leadership concepts/principles for a research study [15] • Conceptualizing by observing and scientific study on how people learn based on their own personal understanding and knowledge of the world • Examples: Study of educational leadership using a simulation approach [16]; Exploration of inquiry-based science teaching, using a learning cycle approach based on constructivist principles with emphasis on the investigation of phenomena [15–18]
Grounded Theory Method [9–13] • Paradigm of inquiry providing a scientific approach that legitimizes acquisition of research data from social psychological processes [9–12] • Method especially useful for researching unanswered questions in the social psychological realm that require the development of more robust theoretical underpinnings to support future research [8–14]	*Principles of Good Practice in Undergraduate Education* [8, 19] • Seven Good Practice principles that may provide context in a simulation teaching and learning research study may include [19]: (1) encouragement of contact between students and faculty (2) development of reciprocity and cooperation among students (3) use of active learning techniques (4) provision of prompt feedback (5) emphasis of time on task (6) communication of high expectations (7) respect of diverse talents and ways of learning

retical or conceptual approaches ***do not actually guide*** qualitative research as they do in quantitative research. That being said, the researcher is still required to be well versed or familiar with the literature and the research findings in the area or focus of the study. Without such an understanding of what is known both empirically and theoretically about the topic being researched, the researcher will be unable to derive a useful qualitative approach.

Notwithstanding the differences between the conceptual or theoretical approaches, in this chapter we will concentrate specifically on ***preparation for the research study*** by exploring how the theoretical approach functions as the foundational structure, vision and focus for the research process. Selection of an appropriate and fitting theoretical approach early in the design process is critical and will provide the organizational foundation for the literature and resource review (including consideration of timing for certain qualitative approaches, such as grounded theory, that can be sensitive to this), design, methodology and analysis (i.e. examination, evaluation, consideration) processes. The theoretical foundation is thus imperceptibly threaded into the fabric of the entire qualitative research study.

Over the past few decades the number and diversity of possible qualitative research methods has expanded significantly [20, 21]. The key consideration in any research is that the *research question is the driving force* behind selection of the appropriate method to address that question. With the many approaches currently available, the general theoretical context chosen is usually an expression of how the researcher wishes to conceptually approach the research question and ultimately portray the results [20, 21].

In many ways creating a work of qualitative research is analogous to building a sculpture, musical composition, or other work of art. Using this metaphor qualitative research may thus be conceptualized as a creative theoretical process (and not simply a method or technique) that centers on two important questions: ***what is being explored,*** and ***how will the data be understood*****?** Research endeavors include 'pushing the boundaries' throughout the entire complex process, ensuring emphasis on the emerging qualitative theoretical approach as the fundamental and foundational support of the research story.

Grant and Osanloo [22] emphasize that a theoretical framework is the "blueprint for the entire qualitative research inquiry. It serves as the guide on which to build and support the theoretical approach and further defines how it will philosophically, epistemologically, methodologically, and analytically approach the dissertation as a whole" [22]. While the aforementioned quotation is focused on dissertation work, the theoretical approach may be applied to qualitative research endeavors. This theoretical blueprint, as described by Grant and Osanloo [22] correlates to the construction of a home, which involves an "exterior view" (i.e. elevation drawing) that provides a structure and global perspective to the research problem, as well as "interior view" (i.e. floor plan) that uses the framework notion to organize the concepts and goals of the study.

It must also be recognized that there may not always be an explicitly pre-determined theoretical approach. A theoretical approach may, in fact, not be described until after gathering adequate data to account for the theoretical underpinnings of a research study. A posteriori theoretical approaches may be developed as one's study is designed with the actual emergence of the data, as in a grounded theory methodological approach [9–13]. An example of this process is a simulation research study where the researcher is seeking to explore how healthcare educators are prepared to facilitate and influence the educational process in the human patient simulation environment [8]. The qualitative research method in this case would guide the study with the emphasis on development and subsequent emergence of a theoretical structure. The emerging data would thus establish/create a posteriori the chosen theoretical approach to further understand the phenomenon. Moreover, the actual formulation of the theoreti-

cal approach evolves from the rigorous simulation research data gathering process. This one example, which showcases the iterative sequence of events within a single study that leads to the selection and application of a theoretical approach, highlights the essential power and complexity of qualitative research [8].

Constructs of Theoretical Approaches to the Research Process

According to Grant and Osanloo [22], four constructs apply to each potential research approach: the ***problem***, ***purpose***, ***significance*** and ***research question(s)***. These constructs are critical for guiding the choice of research design and data analysis and should be used to define the overall research process and evidence gathering techniques that will be used. The ***problem statement*** is essential and defines the root issue of the research. The ***purpose*** justifies the study, answering specific queries on what one hopes to gain or learn from the study. The ***significance*** links the importance and value of the research study. The aforementioned three constructs describe how the theoretical approach connects to the problem, relates to the purpose, and links to the importance of the research study. The final construct, the ***research question(s)***, is complementary to the base or theoretical approach and transforms the above elements into specific areas of investigation on which concrete studies can be built. The final questions posed in the research study will serve to exemplify the relationship between what is known and what problem or subject is being explored. The theoretical approach chosen thus provides the solid base on which the overall shape of the research design is constructed. See Table 11.2 for examples of how these four constructs can be applied to a specific qualitative research study [8].

Table 11.2 Constructs for guiding qualitative research process

Constructs	Examples
Problem	Apparent need for research related to the preparation and application of high-fidelity human patient simulation (HPS) in healthcare education
Purpose	To *explore the process* in preparing healthcare educators in the use of high-fidelity HPS as a teaching/learning approach in undergraduate healthcare education
Significance	Paucity of research available addressing the preparation of healthcare educators in the use of HPS for the reality of their teaching and learning practice
Research question(s)	What is the social/psychological process used to prepare healthcare educators in the use of high-fidelity HPS as a teaching/learning approach for undergraduate healthcare education? How are healthcare educators prepared to facilitate, guide and influence the teaching/learning process in the high-fidelity HPS environment?

Note: The examples above are adapted from the first author's (J.S.) dissertation [8]

Examining Epistemological Beliefs Towards Research Design

Our fundamental beliefs are known to be influenced by our assumptions, values and ethics, and thus will influence our choice of theoretical approaches in research [23–25]. There is no right or wrong answer to this question, no 'one size fits all' theory that works with every research query. Instead, it is the researcher's responsibility to identify their ***own belief systems*** and give due consideration to their own epistemological values when determining an appropriate theoretical endeavor. By way of definition, epistemology refers to the study of knowledge itself and how it is discovered, created, and/or interpreted. Following are examples of epistemic standpoints that may provide foundational qualitative research approaches to study human and social behavior within the field of simulation-based or health profession. These include but are not limited to: positivism and post-positivism, interpretivism, symbolic interaction, feminism, phenomenology, and post-modernism [21].

Qualitative researchers can choose from a multitude of approaches that may have commonalities but may also exhibit great diversity. Curiously, Willis [21] claims there is much more 'paradigm diversity in the qualitative genre than in the quantitative approach' (p.147). The underpinning characteristics of qualitative research are known to include the 'search for contextual understanding' and the 'emergent approach' to guide the researcher in their quest [21]. Contemporary qualitative research continues to evolve and expand from a diversity of paradigms into approaches that contribute to a further understanding of our human and social behaviors within the fields of simulation-based and/or health professional education [21–24].

The epistemological foundation of the qualitative research approach generally encompasses the interpretivist or constructivist paradigms. Constructivism addresses reality as socially constructed; findings are literally created as the exploration proceeds within the research process. This perspective views the meaning of research data as a construct that is established by the research team. In contrast, the quantitative approach typically delineates its findings within the positivistic paradigm, which focuses on objective knowledge that exists "out there" and is discovered via the use of established, valid tools and patterns of statistical inference.

Constructivist and interpretivist perspectives are often used interchangeably in the qualitative research community. In our view this is not strictly accurate, however, as the interpretivist paradigm not only perceives phenomena as socially constructed, but also recognizes the collection and interpretation

Table 11.3 Theoretical and conceptual approach checklist: selection and integration for your qualitative research

What is the professional discipline? (Why does it matter?)
Does the theory, if applicable, match with the methodological plan?
Does the research study methodology draw from the principles, concepts and tenants of the theoretical or conceptual approach?
Do the three (3) constructs (problem/purpose/significance) align well with the qualitative theoretical or conceptual research approach?
Do the research questions require modification for a priori or posteriori theoretical approach?
How does the research approach inform the literature review?
Does the theoretical or conceptual approach undergird the conclusions, implications and recommendations of the data analysis?

Adapted from [22]

of socially constructed data as inherently subjective as well. Those adhering to this view interpret text (and other data) based on "socially constructed realities, local generalizations, interpretive resources, stocks of knowledge, intersubjectivity, practical reasoning and ordinary talk" [25].

When choosing an overall theoretical or conceptual approach, it is thus critical that the researcher connect their larger worldview (constructivism, interpretivism, etc.) to the four constructs (***problem, purpose***, ***significance*** and ***research question[s]***) discussed above in the most congruent manner possible. Only this approach can provide a foundation reliable enough to serve as the base for a qualitative study. This stance is further exemplified by Maxwell's words [25]: "The function of this theory is to inform the rest of your design-to help you to assess and refine your goals, develop realistic and relevant research questions, select appropriate methods, and identify potential validity threats to your conclusions. It also helps you justify your research." [p.]. These points are critical toward creating and building a focused qualitative research design. Table 11.3 provides a checklist that embodies these principles.

A Worthwhile Struggle

The qualitative research paradigm embraces a vast array of theoretical and conceptual approaches. The chapter focuses on elucidation of these approaches and answers the query of 'Why do I need a theoretical approach at all?' Continued improvement of one's research skills, overall understanding, and working knowledge of the theoretical approaches available are important phases in the research journey. Ongoing consultations with advisors, colleagues, editors, mentors and peers are vital to this process, and can provide key insights into how theoretical approaches can be better integrated into your research. Learning more regarding the application of the diverse theoretical approaches will inevitably enhance your perspective and potential repertoire. Ultimately, the theoretical thread, subtly woven throughout the fabric of the research study, provides vital clarity and enhances the usefulness of the research findings. The effort is well worth it!

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