Integrating Theory Into Qualitative Medical Education Research

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The Challenge

"Theory" as a construct can be ambiguous. Those who wish to conduct a qualitative study for the first time may struggle to see how theory can be used to support and enrich qualitative scholarship and research.

Explicitly applying theory to strengthen qualitative research studies is increasingly required by journals and reviewers. However, individuals new to qualitative research may struggle to grasp the central importance of theory and to choose amidst the huge array of existing theories.

What Is Known

Theory is defined as "a symbolic depiction of aspects of reality that are discovered or invented for describing, explaining, predicting, or prescribing responses, events, situations, conditions, or relationships."[1] In other words, a theory is a set of ideas about how the world works. Theory informs various stages of the research process and can clarify the scope and nature of a problem; it also guides the development of research questions and contextualizes the insights drawn from the analysis of data. Researchers must consider choices about theory as part of a strategy for generating understanding of the events or conditions being studied. Thus, it is important to consider how applying theory to the research process will shape the conclusions drawn, and to question how the articulation of the way the world "works" makes particular knowledge claims possible while simultaneously foreclosing others. For a discussion of the importance of being reflexive with regard to the role researchers' play in the creation of reality, see Qualitative Rip Out "Research Design Considerations."[2]

The thoughtful use of theory in medical education research allows us to (1) build on one another's work in order to engage in innovative scientific conversation; (2) deepen our understanding of the problems with which we grapple with in the field; and (3) comprehend the fractured, multiple, intersecting, complex contexts of medical education and care provision. Theory is essential to the scientific enterprise because it connects local, specific phenomena to similar ones elsewhere; it enables cumulative knowledge production through the refinement or reconsideration of our understanding of the world; and it brings people into a conversation about the nature and value of our theories and associated practices.

Researchers need a deep grasp of theory to engage in rigorous medical education research. However, the requirement to use theory can be overwhelming because there are hundreds of theories in use, each associated with a particular discipline and tradition. For example, there are 3 levels of theory: grand theories (focused on abstract concepts); mid-range theories (focused on cultural and contextual variation); and micro theories (focused on interplay of individual experience, action, interaction, and context), all with different foci and explanatory power.[3] There is also a difference between "formal theories" (eg, social network theory) that are abstract and discrete from the specific settings being studied and "substantive theories" (eg, a situated model of clinical learning[4]) generated from researchers' own data and the phenomena studied.[5]

Those unfamiliar with theory might find it difficult to assess the "quality" of a theory, and to tell whether it is "relevant" to the framing of the problem, research questions asked, and implications drawn. To further add to this complexity, across the social sciences—as in other types of science—some theories have (1) been proven to be false and have thus been replaced by more accurate ones; (2) been challenged and refined; and (3) coexisted and employed simultaneously in considering different aspects of a research question.

Qualitative researchers may draw on a single theory or multiple theories when designing a study. This serves to highlight aspects of processes, activities, events, and interactions in the context of medical education and practice. The theory or theories ultimately chosen should fit the phenomena being studied. In the literature, there are many thoughtful descriptions of how conceptual frameworks can be applied in qualitative medical education research.[3,6–9]

Given the above complexities, choosing and applying theory requires thoughtful consideration.

How You Can Start TODAY

Research quality and rigor can be enhanced through the integration of theory.[10] We suggest you begin theory integration using 3 simple steps:

1. *Ask the advice of a colleague* who is familiar with applying theory in qualitative inquiry to suggest possible theories to frame the problem with which you are grappling. Alternately, start by reading reviews of your area of interest or key textbooks or handbooks on your topic. They will be great sources of potentially usable theories.
2. *Read primary or original theoretical sources* in order to (1) gain a deeper understanding of your chosen theory or theories; (2) form your own opinion of the work; and (3) apply this thinking creatively to your study.

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Editor's Note: The online version of this article contains references and resources for further reading and the authors' professional information.

TABLE
Examples of Medical Education Research Articles That Explicitly Integrate Theory

ARTICLE 1

Research focus	To explore the nature of communications among operating room team members in order to identify common communicative patterns, sites of tension, and impact on novices
Theory used	Rhetorical theory of communication as a social act
Why theory was appropriate	The application of this theory made it possible to gain insights into a range of communicative tensions among members of the operating room team
Citation	Lingard L, Reznick R, Espin S, Regehr G, DeVito I. Team communications in the operating room: talk patterns, sites of tension, and implications for novices. *Acad Med*. 2002;77(3):232–237.

ARTICLE 2

Research focus	To understand how patients are involved in hospital bedside teaching encounters
Theory used	Goffman dramaturgy theory
Why theory was appropriate	The application of this theory highlighted a number of interactional devices that were used to include and exclude patients from the teaching of medical students
Citation	Monrouxe LV, Rees CE, Bradley P. The construction of patients' involvement in hospital bedside teaching encounters. *Qual Health Res*. 2009;19(7):918–930.

ARTICLE 3

Research focus	To investigate social scientists' and humanities scholars' integration within the academic medical research environment
Theory used	Theoretical concepts of decoupling, doxa, and epistemic habitus
Why theory was appropriate	The application of these 3 theoretical concepts provided insights into how the work context for SSH scholars does align with the discourse of "interdisciplinarity" in Canadian health research policy and faculties of medicine
Citation	Albert M, Paradis E, Kuper A. Interdisciplinary promises versus practices in medicine: the decoupled experiences of social sciences and humanities scholars. *Soc Sci Med*. 2015;126:17–25.

Abbreviation: SSH, social sciences and humanities.

3. *Review the empirical literature* to see how the theories you are considering have recently been used in medical education or within a particular domain of interest. This step is important if you are entering into productive conversations with authors who are doing cutting-edge work in your area of inquiry.

What You Can Do LONG TERM

Your work should move the field of medical education forward by simultaneously advancing theoretical and empirical knowledge. We present 4 tips that can help enhance your scholarly work in the field of medical education over the long term.

1. *Aim to bring new insights* to the field by employing a particular theoretical lens. For example, Lorelei Lingard, PhD, has drawn on her expertise in rhetorical theory to explore communication patterns among team members in the operating room (TABLE, ARTICLE 1).
2. *Frame your contribution* in terms of refining/adapting the theories you use or developing new theoretical models.
3. *Build a network of scholars who study the same phenomena* you study, using different theories to challenge and advance your thinking. You can build on this network by attending conferences in other disciplines to make connections with like-minded scholars or by searching the Internet and contacting scholars who focus on similar research topics but employ different theories.
4. *Build a network of scholars who use the same theories* you use to enrich your contributions. You can create this network through joining specific theoretical special interest groups or online discussion groups. You can also get to know scholars at your institution's medical education center or search for scholars at your institution who work in the field of medical education. Set a time to meet 1-on-1 with these individuals to discuss your ideas and interests in terms of the theoretical approaches with which you are grappling.

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