The use of theory in qualitative research: Challenges, development of a framework and exemplar

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Abstract

Background. Whilst theoretical grounding is considered important for sound research methodology, consensus on the application of theory in qualitative research remains elusive. Novice researchers may experience challenges in applying theory in qualitative research and these may contribute to the under-use, over-reliance, or inappropriate application of theory. Practical guidance on how theory can inform and guide the conduct of qualitative research is needed.

Purpose. The purpose of this paper is to propose a framework for the application of theory in qualitative research and provide an exemplar.

Methods. The Theoretical Application Framework for Qualitative Studies was developed from the synthesis of existing literature and the authors’ own experience of the application of theory.

Results. The Theoretical Application Framework for Qualitative Studies encourages researchers to articulate which theoretical framework or conceptual framework they are drawing on and how this will be applied by reflecting on the purpose and the context of the study.

Conclusion. The Theoretical Application Framework for Qualitative Studies provides support for researchers to explore how theory can be applied and how to achieve this in qualitative research.

Tweetable abstract: The use of theory in qualitative research

Keywords: theory application, theoretical framework, conceptual framework, qualitative research, inductive, deductive, framework development.
What is already known

- Ontological and epistemological positioning in qualitative research is underpinned by theory.
- While the interaction between theory and quantitative research has been affirmed as important in testing theoretically derived hypotheses, researchers understanding of the relationship between theory and qualitative research appears to be variable.
- It is common for peer-reviewed qualitative research publications to report the “use of theory” without description of how theory was used in the study.

What this paper adds

- This paper proposes a framework for the application of theory in qualitative research that can assist novice researchers to navigate the challenges in applying theory to qualitative research.
- Instead of a rigid application of theory to qualitative research, we believe that researchers should adapt a creative way to use theory and must explicitly describe theoretical application to qualitative research.
- Qualitative research should be valued in the same way as quantitative research, in which qualitative data can be used both to generate new theory or testing an existing theory.

INTRODUCTION.

The scientific foundation of all disciplines is created through the process of inquiry and the development of knowledge and theory (Saleh, 2018). A research study can be classified as “theory-linked research” when the research question, research objectives and the design and conduct of that study are guided by a theory (Chinn & Kramer, 2011). The relationship between theory and research is complementary, dynamic and iterative and the expansion of any discipline depends on the extent to which this process is facilitated (Meleis, 2012). While the interaction between theory and quantitative research has been affirmed as important in testing theoretically-derived hypotheses (Creswell & Creswell, 2018), the relationship between theory and qualitative research remains diverse (Anfara & Mertz, 2015; Green, 2014; Leeming, 2018).

Theory originates from the Greek word ‘theoria’ which means ‘to see’, and this suggests the essential function of a theory is to “reveal phenomena previously hidden from awareness and attention” (Fawcett et al., 2001, p. 117). Theory is a collection of organized, coherent and systematically arranged concepts that explain phenomenon in the real world (Silverman, 2005).
A number of researchers argue that the quality of qualitative research is critically dependent on how theory is integrated into qualitative research (Green, 2014; Kelly, 2010; Pope & Mays, 2020). They argue that orienting concepts from predetermined theory should be interrogated throughout the research process to sensitize researchers studying a particular phenomenon, advocate for the research question and objectives, guide the research design, illuminate data collection, and assist with data analysis and interpretation (Maxwell, 2013). Experienced researcher believes that qualitative research should aim to develop knowledge which can make a difference for individuals through the enhancement of the quality of intellectual evidence gained through qualitative research (Malterud, 2016).

Qualitative research, in alignment with the interpretivist research paradigm, is defined as research inquiry that emphasises the exploration of experience and meaning of a phenomenon of interest (Creswell & Creswell, 2018; Denzin & Lincoln, 2011). Qualitative research has been described as a research methodology which is highly inductive and with an absence of theory in the early phase of the research process (Freshwater & Cahill, 2013; Parahoo, 2014; Wilson & Chaddha, 2009). Examples of deductive application of theory in qualitative research is sparse and is often limited to the context of data analysis (Elo et al., 2014; Wu & Volker, 2009). Qualitative research emphasises understanding of a phenomenon by exploring the varied, lived experience of people or communities. Qualitative researchers have been cautious about using theory in the qualitative research process believing theory imposes meaning and subsequently alters the organic understanding of the phenomenon being investigated (Bendassolli, 2014). Researchers argue that if qualitative research is to understand multiple meanings that people construct about the world, then it is reasonable to start with an absence of predetermined theory (Creswell & Creswell, 2018). Advocates for the absence of theory in qualitative research claim that theories represent the dominant group of people in society; therefore the use of theory in qualitative research may constrain the true nature of qualitative research which is to give voice to vulnerable groups of people in society (Willig, 2017).

In contrast, researchers who endorse intersubjectivity and transparency as pivotal cornerstones of qualitative research argue that it is hard to be convinced that a study can be wholly inductive since all knowledge is theory-laden where researchers draw on knowledge of antecedent research to form a research question and to guide the research design (Pope & Mays, 2020; Saleh, 2018; Sandelowski, 1993). Criticism of inductive qualitative research among research scholars includes Bondas (2013), who asserts that “inductive descriptions of experiences might become naïve and endless repetitions and become lost in superficial structures when there are
no cumulative connections to a theoretical perspective or sometimes not even previous research” (p. 539). Subsequently, the consequence of omitting theoretical perspectives may lead to an excess of qualitative research that result in purely descriptive information, rather than providing an interpretation to explain the why and how questions (Chamberlain, 2005; King & Brook, 2017). Rich and thick description are key features of qualitative research, however, with an absence of a theoretical foundation, these details may only devolve into a story that cannot apply to other settings (Collins & Stockton, 2018; Malterud, 2016).

The purpose of this paper is to propose a framework to guide researchers on the process of making decisions to use theory to guide their qualitative research and if they use theory, how and when theory can be used in qualitative research. This paper also discusses challenges that novice researchers may experience in deciding which theory should be used and the application of the theory. Relevant literature on the application of theory in qualitative research will be narratively reviewed, and the Theory Application Framework for Qualitative Studies (TAF-QS) will be described. Finally, an exemplar applying the proposed framework to a qualitative PhD thesis will be presented. The goal of this paper is to ease the challenge of applying theory in qualitative research and encourage novice researchers to make explicit the use of theory in qualitative research.

THE APPLICATION OF THEORY IN QUALITATIVE RESEARCH
There are three common scenarios in the application of theory in qualitative research 1) no reference to theory; 2) under-use of theory; and 3) overreliance on theory (Anfara & Mertz, 2015; Collins & Stockton, 2018; Green, 2014). This lack of consensus and lack of a practical guide to the application of theory to qualitative research can magnify the challenges that novice researchers experience in deciding how to apply theory and how it is applied in qualitative research. Qualitative research remains characterised as a highly inductive research methodology, resulting in phenomenon description or theory creation, or where theory is used, it is often used as a framework for data analysis and interpretation (Berdahl & Berteo, 2014; Macfarlane & O'Reilly-de Brún, 2012; Wu & Volker, 2009).

Taking a stance that theory is essential in qualitative research and the absence of theory diminishes qualitative research, Bradbury-Jones, Taylor, and Herber (2014) developed a typological framework with five levels to evaluate the application of theory into qualitative research. Their typology ranks the application of theory from 1= seemingly absent; 2= implied; 3= partial applied; 4= retrospectively applied; and 5= consistently applied. Through their
typology, researchers are encouraged to apply theory consistently throughout the qualitative research. Although the typology is a positive effort to increase awareness of using theory in qualitative research, using theory at level five in this typology can lead to one of two common pitfalls including over-reliance or under-use of theory. Under-use of theory is an issue related to the poor establishment of methodology and rigour of qualitative research (Kelly, 2010). Over-reliance on a theory can reduce the development of new knowledge that is critically important to the progress of a profession (Meleis, 2012).

An extensive review of the use of theory in published qualitative research studies by Anfara and Mertz (2015) reported that research scholars hold varied perspectives toward the use of theory in qualitative research. They identified three common perspectives on the role of theory in qualitative research among researchers; that theory has minimal importance in qualitative research; that theory can only inform the selection of a research methodology; and that theory can underpin the selection of research methodology and guide the process of conducting research. In qualitative research, theory exists in various forms including theory underpinning research ontology and epistemology (Creswell, 2013); theory guiding the selection of research methodology and methods (Glesne, 2016); theory as a product of qualitative research (Kelly, 2010); and theory as a guiding framework for qualitative studies (Anfara & Mertz, 2015). In this paper, we focus on theory as a guiding framework for conducting qualitative studies.

Given the challenges of applying theory in qualitative research, we suggest several strategies that may be helpful for novice researchers in the application of theory in qualitative research. The first important step is to understand theory and its role in qualitative research. Novice researchers should equip themselves with an understanding of the different theories and develop the capacity to differentiate how and when theories are used in the conduct of qualitative research. The process of articulating a theoretical or conceptual framework may be daunting and challenging (Kelly, 2010) and it raises the question that if “a researcher who cannot articulate a theoretical framework they may not have done the difficult and essential work to unearth their deepest operating principles and preconceptions about their study” (Collins & Stockton, 2018, p. 2). We believe that the application of theory to qualitative research requires novice researchers to engage in the critique of theory and to identify an appropriate theoretical or conceptual framework. The comprehensive understanding and sharp criticism of existing theory will enable novice researchers to avoid the common pitfalls in using theory in qualitative research.
THEORETICAL APPLICATION FRAMEWORK FOR QUALITATIVE STUDIES

We have developed a theoretical application framework for qualitative studies (TAF-QS) based on the review of current literature on the use of theory in qualitative research and the authors’ practical experience in using theory in qualitative research (Figure 1). We propose that the TAF-QS can assist novice researchers in making decisions on the use of theoretical or conceptual frameworks to guide the conduct of qualitative research. Prior to the illustration of the TAF-QS, we present four important principles that underpin the articulation of the TAF-QS.

The first and most important standpoint is that a definition of the theoretical framework or conceptual framework should be determined at the start of the research process, and the definition should be consistently used throughout the research study. Without clear definitions of the terms theoretical and conceptual frameworks, confusion will likely continue (Wu & Volker, 2009). Within the TAF-QS framework, we concur with Parahoo’s definitions for theoretical framework as a framework created from a single theory to guide the research process. We, however, believe that her definition of conceptual framework seems narrow and may not be applicable to varied qualitative approaches. In the TAF-QS, conceptual framework is defined as a framework that is drawn from concepts of multiple theories or concepts from the review of literature in the field under study (Fain, 2021).

The second standpoint is contrary to the suggestion by researchers that the role of theory in quantitative research is different to the role of theory in qualitative research (Anfara & Mertz, 2006; Parahoo, 2014). We believe that theory has a similar role to play in both quantitative and qualitative research (Young, Taylor, & Renpenning, 2001). Therefore, qualitative researchers should articulate the choice of a theoretical or conceptual framework at an early stage of the research process. We believe that a theoretical or conceptual framework should be integrated from the start of the research process to provide rationales for the research question, assist with the refinement of research objectives and provide guidance for data collection.

Third, we believe that a position supported by a range of literature that quantitative research is “theory testing” and qualitative is “theory generating” research needs to be re-considered (Maxwell, 2013; Parahoo, 2014; Streubert & Carpenter, 2011). In the TAF-QS framework, we argue that similar to quantitative research, qualitative research is appreciated both in the context of discovery and validation (Berdahl & Bertea, 2014; Collins & Stockton, 2018). Practically speaking, the TAF-QS proposes that in addition to the common goals including generating
theory or describing/explaining the phenomenon studied, findings from qualitative research can be used to validate an existing theory or a conceptual framework (Berdahl & Berteo, 2014).

Finally, we believe that all knowledge is theory-laden and therefore the application of theoretical or conceptual framework should be explicitly described in qualitative research (Collins & Stockton, 2018; Mitchell & Cody, 1992; Urquhart, 2017). However, we recognise that consistently applying theory throughout the qualitative research process by following a rigid typology is fruitless. Qualitative researchers should adopt a critical, flexible and creative way to apply theory into qualitative research (Shelton, Griffith, & Kegler, 2017). The researcher needs to decide when to let the theoretical framework or conceptual framework “in” and when to let the theoretical framework or conceptual framework “out” based on the purpose and the context of the research study. These concepts will be explained and illustrated in the following sections.

Elements of TAF-QS

We propose a framework to assist researchers to apply theory to qualitative research (Figure 1). In this framework, we divide the process of a research into three phases: pre-design, research design and research conduct.

**Pre-Design**

The pre-design phase is the process where qualitative researchers recognise and clarify research problems. We propose that the starting point of a qualitative study is the broad understanding of the phenomenon to be studied. In this stage, researchers may undertake an iterative process in which the researcher moves between the research phenomenon, research literature, and critique of theory. After the initial phase, when gaps in knowledge become apparent, the researcher will be able to justify the theoretical framework or conceptual framework chosen to guide the design and conduct of the research study.

**Research Design**

The selected theoretical framework or conceptual framework is then integrated into the design phase of qualitative research to guide the formulation of the research question, the refinement of research objectives, and the selection of qualitative research method and data collection methods. By discriminating the terms theoretical framework and conceptual framework, we suggest qualitative researchers to use consistently theoretical framework and conceptual framework following the purpose of the research study. If a qualitative study aims to describe
or explain the phenomenon studied (i.e. phenomenology, narrative and ethnography), the researcher can use either a theoretical framework or conceptual framework. If a qualitative study aims to describe or explain the phenomenon studied and generate a new theory (i.e. grounded theory), the researcher should articulate and use a conceptual framework from various concepts from the process of doing literature review and if a qualitative study aims to describe or explain the phenomenon studied and validate an existing theory (i.e. ethnography), the researcher should use theoretical framework.

**Research Conduct**

The research conduct comprises two primary steps including data analysis and data interpretation.

**Data analysis:**

Post data collection, the researcher needs to decide whether to ‘let the theoretical framework or conceptual framework out’ which means that data analysis will be purely inductive; or if concepts from the theoretical or conceptual framework will be used to deductively analyse the data by ‘letting the theoretical framework or conceptual framework in’. As discussed earlier in this paper, the researcher has three options relating to the aims of the research.

1. The qualitative research aims to describe or explain the phenomenon under study. The researcher may consider letting the theoretical framework or conceptual framework ‘in’ the data analysis. In this scenario, the qualitative researcher conducts data analysis deductively in which data are arranged into pre-determined categories in the theoretical framework or the conceptual framework to describe or explain the phenomenon studied.

2. The qualitative research aims to both describe or explain the phenomenon under study and generate new theory. In this scenario, the researcher will consider letting the conceptual framework ‘out’, and the data analysis will be performed inductively.

3. The qualitative research aims to both describe or explain the phenomenon under study and validate an existing theory. Like the second aim, the researcher will consider letting the theoretical framework ‘out’ and performing the data analysis inductively.

**Data interpretation:**

Once the data analysis is accomplished, the data interpretation will return to the theoretical framework or conceptual framework to help describe or explain the research findings. If the
study aims to generate a new theory in addition to a description of phenomenon being studied, findings from the data analysis are then used to endorse or repudiate the theory or conceptual framework. If the study aims to evaluate an existing theory in addition to the description of the phenomenon being studied, findings from the data analysis are then compared with an existing theoretical framework.

EXAMPLE OF USING THEORY IN A PhD STUDY
In this section, we present the application of the proposed TAF-QS framework to explain the phenomenon studied using a well-known theory in the field of nursing, the Cultural Care theory (McFarland & Wehbe-Alamah, 2018).

The study
Focused ethnography was used to understand the health beliefs, health seeking behaviours and perceived support needs among older Vietnam-born people living with chronic disease in the Australian context. In specific, the research aimed to 1) explore how culture influences health beliefs in terms of its meaning, causation, symbols, appropriate treatment and management among older Vietnam-born people living with chronic disease in Australia, 2) describe health behaviours related to chronic disease management among older Vietnam-born people living with chronic disease in Australia 3) explore how demographic characteristics affect health beliefs and health behaviours among older Vietnam-born people living with chronic disease in Australia, 4) explore perceived healthcare needs related to chronic disease management among older Vietnam-born people living with chronic disease in Australia and 5) explore perceptions of support networks in relation to the management of health and disease among older Vietnam-born people living with chronic disease in Australia. The ethnographic data were collected through participant observation and in-depth interviews.

The theoretical framework
The Theory of Cultural Care Diversity and Universality also known as Cultural Care Theory (CCT) was developed by nurse theorist Madeleine Leininger and the theory was selected to guide the design and conduct of this ethnographic study (Leininger, 1997). The CCT was created within a particular geo-cultural context, the United States of America and was written in the style of an American mid-range nursing theory (McFarland & Wehbe-Alamah, 2018). The theory acknowledges that culture influences people’s beliefs and behaviours in relation to health. The ultimate purpose of the CCT is to encourage nurses to understand the influence of culture both from an emic (inside the culture) and etic (outside the culture) perspective to help
inform their practice and provide culturally congruent care (Leininger, 1997; McFarland & Wehbe-Alamah, 2018).

In alignment with the theory, Leininger developed the Sunrise Model to visually portray how elements of the theory interact and this model is presented as a conceptual theory guide for researchers to visualise how the factors named in the model influence culturally based care (Leininger, 1997; McFarland & Wehbe-Alamah, 2018). The Sunrise model comprises three levels. The upper level resembles a rising sun with rays representing the cultural and social dimensions of cultural care. The rays indicate basic elements of cultural assessment including education, economy, policy and legal, culture, kindship and society, religion and philosophy, and technology. Convergence of these factors into a central core suggests that these interacting elements shape the unique care expression, patterns, and practice of individuals, families, groups, communities, and institutions in diverse health care system. Nursing care is positioned within the mid-level and is framed as central. Two overlapping areas are the generic or folk system (emic view) and the professional system (etic view). The intersection of these three circles suggests that nursing care decisions should be based on integrated knowledge of generic and professional care systems. The lower level of the Sunrise model describes three strategies for enhancing and maintaining culturally competent nursing care: cultural care repatterning/restructuring, cultural care accommodation/negotiation and cultural care preservation/maintenance (Leininger, 1997; McFarland & Wehbe-Alamah, 2018).

Rationale for selecting Leininger’s theory of Culture Care
The selection of Leininger’s theory was driven by the student researcher’s epistemological stance, the student researcher’s background, and the nature of the research question. Research scholars believe that epistemological and ontological dispositions shape the way in which a researcher sees the world and the production of knowledge and these dispositions significantly shape the selection of theory underpinning qualitative research (Collin & Stockton, 2018). Within this focused ethnography, the student perceived that information obtained from patients constitutes a valuable source of knowledge that together with scientific knowledge helps to guide nursing interventions. The researcher’s experience in working with older people from across different cultures was another factor that affirmed the selection of Leininger’s theory.

The application of Leininger’s theory in a focused ethnographic study
Leininger’s theory of cultural nursing care was integrated in this ethnographic study in a combined deductive and inductive approach. The application of Leininger’s theory was driven
by the purpose of the study and the context of the theory selection. The following sections describe the application in more detail.

In the design phase of this focused ethnography, Leininger’s theory was deductively applied to identify the research problem, advocating a rationale for the research question, to refine research objectives and data collection. Leininger’s theory identifies culture as a propounding factor influencing how people believe and behave toward health, illness and death. Therefore, Leininger’s theory was well-positioned to inform the research question, to explore cultural influences on health beliefs, health behaviours and perceived support needs among older Vietnam-born people living with chronic disease in the Australian context. The research objectives of this ethnographic study were refined by using the first level of the Sunrise model where interacting elements are described. In the data collection stage, Leininger’s theory was used as a framework to determine the focus of participant observations and the in-depth interviews. The participant observations of each individual older person were structured using the Sunrise model including the collection of data on the home context and wider community of participants, biographic data including age, gender, philosophy, religion, education, economy, technology and immigrant status, data on participant beliefs and data on behaviour patterns while living with chronic disease.

In the later phase of this focused ethnography, Leininger’s theory was ‘let out’ and data analysis was conducted in a purely inductive way that enabled the creation of ethnographic data analysis and unexpected findings to emerge (Wilson & Chaddha, 2009). Specifically, data in this ethnographic study were inductively analysed through thematic analysis and the development of themes and sub-themes were wholly driven by the data not the concepts in Leininger theory. Although Leininger’s theory of Cultural Care presents the earliest theory of cultural care in nursing, it has been critiqued for its essential view of culture as stationary and a predominant reference to ethnicity (Culley, 2006; Gustafson, 2005). Nurses have argued that Leininger’s theory is rooted in the American context and may not be applicable to other contexts such as Australia and this has led to hesitancy in using Leininger’s theory to improve culturally competent care in Australia (Seaton 2010). Through an extensive review of literature relating to culture, Blanchet Garneau and Pepin (2015) agree that Leininger’s essentialist view of culture may not be relevant as culture is a dynamic and socially-constructed process. Seaton (2010) through her work that critiques cultural care in nursing indicates that there is only scant published response, from the proponents and advocates of the theory. Consequently, Seaton (2010) argues for a need for empirical research to validate this theory and stimulate the re-
development of understanding. In this context, in addition to the primary research objectives, this focused ethnographic study also aimed to use empirical data to compare the data with Leininger’s theory and to validate Leininger’s theory.

CONCLUSION
The appropriate application of theory to qualitative research can advance the scientific foundation of all disciplines. In this paper the Theoretical Application Framework for Qualitative Studies is proposed as a resource to assist novice researchers to navigate the challenges in applying theory to qualitative research. In this framework, researchers are encouraged to read widely in the early research process in order to articulate an appropriate theoretical framework or conceptual framework to guide the entire research process. Instead of a rigid application of theory to qualitative research, we believe that researchers should adapt a creative way to use theory and must explicitly describe theoretical application to qualitative research. Qualitative research should be valued in the same way as quantitative research, in which qualitative data can be used both to generate new theory or testing an existing theory.

By adopting this approach to qualitative research, we argue that the application of theory in qualitative research is as important as in quantitative research and more qualitative research is needed to refine existing theory in all disciplines with the aim of expanding knowledge.

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