

Use of Theoretical Frameworks in Research

Readers of research reports probably have noticed some studies explicitly name a theory that guided the research and some do not. It is not always clear in reports what role the theory or theoretical framework played (or did not play) in the research. In this issue, Parker (2014) outlined a study about decision making by medical-surgical nurses when they activate rapid response teams. In the report, in the section called “Nurse Decision Making,” the author concisely discussed theories of decision making and the models of decision making that others have used to examine the topic with nurses. In addition, Parker used an instrument to measure decision making based on these various decision-making models. This report is a useful example of how theory guides research and also makes sense of the subsequent findings.

What Is a theory?

First, various terms are used to refer to the theoretic basis of a study, including *theory*, *theoretical framework*, *conceptual framework*, and *models*. Theory is a set of interrelated concepts (or variables) and definitions that are formed into propositions or hypotheses to specify the relationship among the constructs (Creswell, 2013). A formal theory is well-developed and is useful to predict behavior or outcomes. A theoretical framework or conceptual framework is less formal and typically less developed than a formal theory. Such a framework often is useful when exploratory work is being done to expand the theoretical ideas. A conceptual model usually is focused more narrowly and structured more loosely than theories, and does not link concepts (Polit & Beck, 2014). For example, the Lauri and Salanterä (2002) instrument is based on a model that describes how nurses make decisions but does not predict how effective each type is in making decisions. For the purposes of this column, I use the general word *theory* to encompass all these terms.

In simple terms, a theory is a representation of a portion of reality that helps us make sense of complex phenomena. It is not the reality itself; it is a tool for better understanding. Theories are not right or wrong but some theories offer a better fit for particular situations. Each theory can provide a different lens for looking at a problem, allowing it to be examined from different perspectives for full understanding of all its facets (Reeves, Albert, Kuper, & Hodges, 2008).

Theory in a study can be stated clearly or it can be implied (Bond et al., 2011). For example, in physiological studies, the framework usually is drawn from current understanding of physiology and pathophysiology. It often is presented as the state of science in a particular area. In more abstract areas of research, specific theory can be useful to frame the problem, develop an intervention, and guide the research study.

A theory about a phenomenon, such as nurse decision making, parsimoniously explains how nurses make decisions in the practice setting. Each theory will have a number of interrelated concepts. *Concepts* are abstract representations of specific parts of the theory (Polit & Beck, 2014). In the Parker (2014) study, the decision-making models described how different people have different ways of making decisions. Some people are intuitive decision makers, some are analytical decision makers, and others use both types of decision making. While it can seem even more complex, this concise depiction helps us understand the process of making a decision and measure how each nurse in a study normally makes decisions.

Guiding Research

A theory should not be added to a study because the researcher was told in school that a theory is needed for a research study. A clear connection should exist among the theory, the problem or phenomenon being studied, and the research method. For example, Parker (2014) used an instrument developed by Lauri and Salanterä (2002) based on the various models of decision making. Using a valid instrument based on theory allows the researcher to make comparisons between the results of different studies that otherwise could not be made if the researcher used a separate instrument. In addition, when conducting the study, the researcher also is testing the theory to determine if it works in the study population.

In Parker's (2014) study, a factor analysis showed items measuring analytic decision making correlated with each other and intuitive decision-making items correlated with each other; however, each of these did not correlate significantly with the other type. In other words, intuitive items were connected with other intuitive items, but not with analytic items. The same is true for analytic items. This supports the validity of the instrument and also supports the theory that guided development of this instrument. When we review the results, then, we can have some confidence they are measuring aspects of the theory appropriately. In addition, investigators should make connections between their results and the theory clear in

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their discussion of the findings. They should relate their results to other research in which the theory was used. Parker compared his results to results by Lauri and Salanterä (2002).

In another example, Yoder (2005) described how the Roy Adaptation Model was used in several studies: a study of quality of life in patients with cancer, a study of exercise intervention in patients with cancer, and another study of clinical outcomes in patients with burns. Yoder presented figures outlining each aspect of the theory and how each aspect was measured. Each of the studies provided results helpful to patients, but they also provided support for the Roy Adaptation Model. The figures in this article are useful examples of how to make clear connections between concepts within a theory or model and the measurement instruments. This can be particularly useful in research proposals.

Theory also is used to guide the development of effective interventions for patient care. In this case, theorists may use both theory and empirical results to suggest one variable (the intervention) can have a positive effect on another variable (e.g., a person's behavior or physical outcome). If a theory indicates, for example, that teaching a patient about his or her disease will improve self-management, then we could conduct an intervention study to test that proposition. Theory also may provide us with other variables that can moderate this effect (Polit & Beck, 2014).

Other Issues

When research results are not what were expected, two reasons are possible: either the research design or measurement of variables was flawed, or the theory guiding the research did not fit the situation or population. In the case of an inappropriate theory, the researcher may be able to suggest modifications to the theory. The modifications then would need to be tested. Useful theory is refined by this iterative process (Johnson & Webber, 2010).

In qualitative research, theory can have several purposes. General theories, such as interactionism and critical theory, can be used to guide qualitative research (Reeves et al., 2008). These are theories that conceptualize how we should study phenomena (Polit & Beck, 2014; Sandelowski, 1993). On the other hand, qualitative investigators often want to generate rather than test theory based on what they find with their particular informants. Prior to and during data collection, researchers often avoid substantive theory about the specific phenomena to prevent being influenced by prior theorizing about the topic. Thus, the theory generated in qualitative research is grounded in data that come from directly observing and talking to the participants (Creswell, 2013).

This short column can not cover all the nuances of theory and research. Readers can refer to the references cited or to a good research textbook to obtain more information. Because theory is important to conducting and understanding research findings, readers should understand what theory is and how a researcher can use it effectively to guide a study. [MSN](#)

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