



### Case Study Research Methodology in Nursing Research

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Through data collection methods using a holistic approach that focuses on variables in a natural setting, qualitative research methods seek to understand participants' perceptions and interpretations. Common qualitative research methods include ethnography, phenomenology, grounded theory, and historic research. Another type of methodology that has a similar qualitative approach is case study research, which seeks to understand a phenomenon or case from multiple perspectives within a given real-world context (Taylor & Thomas-Gregory, 2015). Case study research has been described as a flexible but challenging methodology used in social science research. It has had the least attention and support among social science research methods, as a result of a lack of a well-defined protocol, and has had limited use in nursing research (Donnelly & Wichula, 2012; Taylor & Thomas-Gregory, 2015; Yin, 2012, 2014). Three methodologists, Yin, Merriam, and Stake, have been credited as seminal authors who have provided procedures for case study research (Yazan, 2015). This article will describe and discuss case study research from the perspective of these three methodologists and explore the use of this methodology in nursing research.

#### Definition

The term *case study* is well known in the nursing profession as a teaching strategy to analyze a patient's clinical case. *Case study research* is less employed and is defined similarly by all three methodologists as a research approach that focuses on one phenomenon, variable or set of variables, thing, or case occurring in a defined or bounded context of time and place to gain an understanding of the whole

of the phenomenon under investigation (Merriam, 2009; Stake, 1995; Yin, 2014). The phenomenon or case can be a person, a group, an organization, or an event. The overall goal of case study research is to seek the "how" or "why" a phenomenon works, as opposed to other qualitative research approaches that seek to define the "what" of a phenomenon (Polit & Beck, 2012). Case study research usually requires detailed study during an extended period of time in an effort to obtain present and past experiences, situational factors, and interrelationships relevant to the phenomenon. Case study research has been viewed by some authors as a qualitative research methodology (Polit & Beck, 2012), and others view this type of research as flexible, using a mix of qualitative and quantitative evidence (Taylor & Thomas-Gregory, 2015; Yin, 2014).

#### Case Study Designs

Merriam, Stake, and Yin each have a differing perspective on case study design. Merriam (2009) purports a flexible design that allows researchers to make changes throughout the research process that is based on two or three research questions that construct and guide data collection. Stake's (1995) design is based on a literature review that is the foundation of the research questions and theoretical framework but assumes that major changes may occur throughout the research as part of a process described as progressive focusing. Yin's (2014) design is based on a sequence and includes several design options for the researcher. The selection of a case study design is based on the chosen theory and the case to be studied. The first decision is to determine

whether the case study will use a single case or multiple cases. The use of a single case study is an appropriate design for certain circumstances, including when the case represents (a) a critical case to test theory, (b) an unusual or unique case, (c) a common case that can capture an understanding of usual circumstances, (d) a revelatory case that previously has been inaccessible, or (e) a longitudinal case (Yin, 2014).

A multiple case design is used when two or more cases are chosen to examine complementary components of the main research question (Yin, 2012). The multiple case design may be selected when the researcher is interested in examining conditions for similar findings that may be replicated or in examining conditions for contrasting cases. When choosing multiple cases, no formula exists to determine the number of cases needed, unlike power analysis to determine sample size (Small, 2009). In general, including more cases in a multiple case study will achieve greater confidence or certainty in a study's findings. Conversely, the use of fewer cases will yield less confidence or certainty.

Single and multiple case studies can use holistic or embedded designs. A holistic design comprehensively examines a case or cases, and an embedded design also analyzes subunits associated with the case or cases.

Case study research is flexible and can use multiple sources of data. Yin's (2014) methodology incorporates qualitative and quantitative data sources, and Merriam's (2009) and Stake's (1995) methodology exclusively use qualitative data

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