

FEATURE ARTICLE

METHODOLOGY AND METHODS: WHY THE CONFUSION AMONGST NOVICE RESEARCHERS



C. Patricia Mazzotta, RN, BScN, MScN¹

Introduction

As I embark on a new chapter in my life as a doctoral student, I find myself amidst vast amount of terminology, concepts, and new ways of viewing and conducting nursing research. I consider myself novice in the field of research; theoretical perspectives and quantitative studies influence my worldview, mainly because of my areas of practice and past education. Hence, I realize I need to challenge my thinking and myself if I am to embrace a fluid approach in order to appreciate diverse standpoints especially when the concepts are abstract and unfamiliar to me. For instance, terms such as *methodology* and *method* are interchangeably utilized in the research world and maybe confusing for a novice like myself. Therefore, it is imperative for researchers to understand the terms *methodology*, and *method* if we are to conduct studies that are credible and generate new knowledge.

The goal of this paper is twofold, one, a reflective piece whereby I provide a brief explanation of my experience with research and therefore, my understanding of *methodology* and

method. The second part of this paper examines diverse perspectives on how researchers define *methodology* and *method* and lastly, I will summarize what I have gleaned from both parts of this paper and what it means to me as a doctoral student as I contemplate the type of research I will conduct.

My Understanding of Methodologies and Methods

As I reflect on my practice and the influence research has had on me as a critical care and trauma nurse, I am aware that working in a teaching hospital limited my understanding of qualitative research; the reason being was that quantitative research influenced our interventions and directed our care. I felt comfortable knowing physicians and drug representatives would *tell me* what I needed to know. Although, I was always cognisant of how I nursed and took great pride in establishing meaningful connections with clients and their loved ones. I was influenced by a particular view of science, that of natural science. Until the moment that forever changed my perspective of qualitative research, it happened a

¹ Doctoral Student, School of Nursing, University of Victoria, Victoria, BC, Canada and Nursing Professor: Centennial College, Toronto, ON, Canada; P.O. Box 631, Station A, Toronto, ON, Canada M1K 5E9; Fax: 416-289-5169; Email: pmazzott@uvic.ca

few years ago when a 19 year old was brought to the trauma room; he had been shot in the chest. I remember talking to him when he arrived and in a matter of 15 minutes, I knew him as a person.

Despite heroic measures, we were unable to save his life. I sat in silence with his mom; 40 minutes later, she turned to me and asked, "Were you kind to him?" I said, "Yes, I was," I proceeded to tell her about her son. I realized at this moment that science could not capture the meaning of this interaction and a scientific environment was insufficient to the manner in which I practiced as a nurse. I am not a doctor, I am a nurse, and as such, I should complement medicine without losing the essence of who I am. It was at this point that, I began to challenge the status quo in my environment and became a consumer of research. Appreciating the importance of integrating evidence-based practice founded on the best research evidence (Burns & Grove, 2011) was fundamental and congruent within a critical care environment-one dominated by science. Rather than viewing research as a dichotomy of quantitative versus qualitative, I immersed myself into trying to extend my understanding of the importance of both approaches in an environment where nurses and doctors relied heavily on science and technology to keep a patient alive. What was evident to me was that quantitative research could not capture the essence of life experience or meaning. Therefore, nurses must educate themselves in diverse methodologies to extend their knowledge of nursing research that informs their care and patient outcomes.

My Master of Nursing Program introduced me to my first qualitative research course. I began to understand the importance of understanding epistemology (interpretation)- (Streubert Speziale & Rinaldi Carpenter, 2007) the theory of knowledge (Polit & Beck, 2008, p. 13) and ontology (interpreter) (Streubert Speziale & Rinaldi Carpenter, 2007)-"what is the nature of reality" (Polit & Beck, 2008, p. 14) and the influence both of these terms have on *methodology* and *method*. For example, ontology consists of multiple truths; the participants themselves construct these truths because it is their own reality (Polit & Beck, 2008). The epistemology is the interaction that occurs

between the researcher and participant and knowledge interpreted; essentially epistemology is embedded within a theoretical perspective and methodology (Polit & Beck, 2008). Meaning, that *methodology* is the research design itself, and the research question determines the type of *methodology* one should use. Therefore, the *method* is the techniques used by researchers to gather and analyze the information in order to answer the research question (Polit & Beck, 2008). The manner in which *methodology* and *method* was introduced to me in my master's program is consistent with my doctoral program.

Contrasting my graduate programs, my undergraduate nursing research course solely focused on quantitative research and statistics. The term *methodology* was explained as either "quantitative or qualitative" (Burns & Grove, 2011). In one lecture, I learned what qualitative *methods* were, for instance *methods* are the types of qualitative research (designs), for example, "phenomenological, grounded theory, ethnographical and historical research" (Burns & Grove, 2011, p. 21). *Methods* were not considered the *how to* of research; rather *methods* were what I now understand are *methodologies*. This caused great angst for me in my graduate studies because I was confused by how researchers used the terms *methodology* and *methods* interchangeably. As my confidence and knowledge evolved I was able to differentiate between the two concepts, however, what was illuminating for me was the importance of conceptually defining these two terms for consistency and avoid ambiguity. This required me to relearn concepts and familiarize myself with the proper terminology, definitions, and application of concepts.

What Do The Researchers and Literature Say?

As a novice researcher, I often encounter barriers to understanding research. One of the reasons is because researchers who conduct studies use the terms *methodology* and *method* interchangeably. For instance, Crotty (1998) suggests constructing a research proposal does not have to be complex if the researcher asks what *methodology*, and *method* the researcher is conducting and how are they justified. Crotty (1998)

simplifies these questions by emphasizing the method is *how* data is collected and analyzed; the *methodology* is the process of carrying out the study. Embedded within methodology is the theoretical perspective which gives structure and meaning to the study by providing the philosophical underpinning that will guide the study. The epistemology is rooted in the theoretical and *methodology* of the study (Crotty, 1998) because knowledge is generated. Similarly, Carter and Little (2007) posit that *methodology* provides researchers the means of understanding how research should proceed, in addition, a theoretical underpinning helps justify the *method*. The authors define *method* to include "sampling, data collection, data management, data analysis and reporting" (Carter & Little, 2007, p. 1318). Petty, Thompson and Stew (2012) expand on both Crotty, Carter and Little's definition of *methodology* by reiterating that *methodology* is inclusive of theoretical, political, and philosophical underpinnings. These concepts influence social research and have implications to *methods* employed by the researcher. However, Petty et al's (2012) definition of *methods* is a simpler one, whereby, they suggest *methods* are the tools of data collection and analysis. Congruent with the aforementioned examples is Byrne (2001) who suggests that grounded theory is a *methodology* and its research *method* include resources that a researcher employs to yield information regarding social interaction, in essence, the collection of data, analysis, and dissemination of findings.

In contrast, Burns and Grove (2011) use the term *research approaches* to describe the types of methodology for instance in quantitative research, they include "descriptive, correlational, quasi-experimental, and experimental" (p. 34) and in qualitative research "phenomenology, grounded theory, ethnographic and historical research" (Burns & Grove, 2011, p. 73). These authors consider *methodology* to mean "quantitative, qualitative and outcomes research" (Burns & Grove, 2011, p. 3), this is very confusing, because when I reflect on the definition of *methodology* according to Burns and Grove (2011), I think of the assumptions underpinning quantitative and qualitative research. Similarly, Munhall (2012) refers to qualitative research *methods* as having something to offer "as research paradigm" (p. 61) which leads me to

believe she is referring to *methods* as the assumptions of qualitative research and not the *methodology* that constitutes methodological designs. This approach is congruent with my earlier understanding of *methodology*. Burns, Grove and Munhall's definitions of *methodology* and *method* are misleading to researchers and without taking advanced courses in research, I would be reading studies and interpreting them erroneously.

In summary, it is impossible for me to capture the enormity of the barriers facing novice nurse researchers when experts use terminology interchangeably. I often find myself thinking for extended periods and wonder if I have made a mistake in the manner I have interpreted a study based on how researchers have used certain terms. Nevertheless, I must be mindful that a researcher's worldview influences how they use terminology and interpret concepts. Research continues to evolve, therefore, a researcher may hold biases because of their education and training they received from their mentors, hence, influencing how they conduct studies. This does not mean studies are wrong, rather, I realize I have a responsibility to understand the terms, be able to analyze and interpret what the researcher is communicating, because in doing so, I become increasingly knowledgeable and am able to determine the credibility of a study.

As a researcher I must be aware of my own biases, I realize this is vital for me as an educator and doctoral student to avoid influencing others perception of research. For example, my comfort lies within a positivist paradigm, because my practice experience and professor influences have been with quantitative studies, maybe this is why I feel the need to have a conceptual definition that clearly defines *methodology* and *methods*. However, as I transition as a doctoral student, I understand what is most important is not what methodology I am comfortable with, because ultimately, the research question is what guides research *methodology* and thus *methods*. Therefore, as a researcher I must be cognisant in that, I may need to step out of my comfort zone in order to appreciate the diversity within the world of nursing research.

About the Author

C. Patricia Mazzotta is a full time Professor in the RPN to BScN Bridging to University Nursing Program at Centennial College in Toronto Canada. Currently she is enrolled in the PhD Nursing Program at the University of Victoria, British Columbia, Canada. She has a research interest in 'Mentorship of expert nurses and (re)enacting compassionate and wholistic care for nurses practicing in Emergency/Trauma units.' Patricia's clinical expertise includes Coronary Intensive Care, Emergency, and Trauma nursing. She was a point of care nurse for over 17 years; her passion includes mentoring, curriculum development, transformational teaching, and learning.

Acknowledgment: *I would like to thank Dr. Gweneth Doane, School of Nursing, University of Victoria, Victoria, BC, Canada, for her continued support and feedback on this manuscript.*

References

- Burns, N., & Grove, S. K. (2011). *Understanding Nursing Research. Building an evidenced-based practice* (5th ed.). Maryland Heights, MO: Elsevier Sanders.
- Byrne, M. (2001). Grounded theory as a qualitative research methodology. *AORN Journal*, 73(6), 1155-1156.
- Carter, S. M., & Little, M. (2007). Justifying knowledge, justifying method, taking action: Epistemologies, methodologies, and methods in qualitative research. *Qualitative Health Research*, 17(10), 1316-1328.
- Crotty, M. (1998). Introduction: The research process. *The Foundations of Social Research*. Thousand Oaks: SAGE.
- Munhall, P. (2012). *Nursing Research: A qualitative perspective*. Jones and Bartlett: Sudbury.
- Petty, N. J., Thompson, O. P., & Stew, G. (2012). Ready for a paradigm shift? Part 2: Introducing qualitative methodologies and methods. *Manual Therapy*, 17, 378-384.
- Polit, D.F., & Beck, C.T. (2008). *Nursing research: Generating and assessing evidence for nursing practice* (8th edition.). Philadelphia, PA: Wolters Kluwer/Lippincott Williams & Wilkins.
- Streubert Speziale, H. J., & Rinaldi Carpenter, D. (2007). *Qualitative research in nursing. Advancing the humanistic approach* (4th ed.). Philadelphia, PA: Wolters Kluwer/Lippincott Williams & Wilkins.

Remembering the Lady....(from page 73)

At the end of my visit, it made me realize that this short but memorable visit to the Florence Nightingale Museum had deepened my thoughts about Florence Nightingale. It gave me the opportunity to know her more:

- As a person who is often described as strong-willed and courageous lady but has a soft heart for the poor and the ill.
- As a nurse who is committed to her vocation, who shows compassion to the sick and the dedication to her craft surely entitles her to another name, as the Angel of Crimea.
- And as a leader who caused an enormous transformation in the field of health care, particularly in nursing, a once dishonored job but revolved into an honorable profession.

Truly, the legacy of Florence Nightingale, her life and her works, is worth commemoration and celebration.

About the Author

Maria Bernadette R. Daplas, EdD, RN is a faculty member of the College of Nursing and the College of Nursing Graduate Studies of De La Salle Health Sciences Institute. She is the author of *Nursing Education across Asian Culturesthe trend in East Asia* where her passion and her professional interest in nursing education and research, transcultural nursing and global nursing trends is revealed. She also served her institution as the former level 4 coordinator for nursing and former vice dean of the College of Nursing and School of Midwifery. She is actively involved in nursing related committees, research/ thesis advising and a member of the Technical Review Panel in the undergraduate and graduate nursing program of her institution.