

Nursing research methodology



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Introduction

Research is an essential part for the growth of any profession in today's world. Nursing research is a systemic inquiry to answer the question or problems encountered in the clinical practice, education and administration (Polit & Beck, 2008). Research studies have great importance in nursing profession because it provide strong evidence that help nurses to make sound clinical decision and judgment in the clinical setting; it helps to give evidence based nursing care to the patient that would be clinically appropriate, cost effective and result in positive outcome of patient. Moreover, it assists to elevate the standard and reputation of nursing profession. In addition, knowledge contribution will be increased in the discipline (Polit & Beck, 2008). Therefore, nurses are expected to understand and conduct research in their field. This paper illustrate the paradigms for nursing research, highlight the epistemological and ontological assumption related to Positivist and Naturalistic paradigms, mention the philosophy of quantitative and qualitative research than narrate the underlying philosophy that will guide my thesis work.

According to Donaldson and Crowley (as cited by Northrup, 1992), " a discipline is characterized by a unique perspective, a distinct way of viewing all phenomena..." (p. 154). Philosophy of a profession serves as a guide for the practice and research. Nursing philosophy can give a direction for nurse's practice, education, research and scholastic work (Steven & Edwards, 2008). The key components of philosophy include " ontology" and " epistemology". Ontology deals with nature or involves the philosophy of reality; whereas, the term epistemology comes from the Greek word "

episteme” means knowledge. In simple term epistemology is the philosophy of knowledge or how we come to know the reality (Gortner, 1993).

Research philosophical paradigm are sets of beliefs and practices that regulate inquiry within a discipline by providing lenses, frames and processes through which study is carried out (Steven & Edwards, 2008).

Research philosophy directs the perspective from which researcher formulate research questions, plan how problem can be investigated, select research design as well as identify what methods are used and how data are collected, analyzed and interpreted (Steven & Edwards, 2008). Therefore, nurse researchers before conducting any study should have clarity about the paradigm because it will enable them to structure inquiry, and select the research approach. According to Polit & Beck, (2008) Nursing research paradigms are broadly classified as Positivist paradigm (also termed as Empiricist) and Naturalistic paradigm (also termed as Post-positivist, Interpretative or Constructivist). The researchers does not always clearly state the philosophical stance on which the study is based; however, one can identify the stance by carefully reading the literature review, identifying the research question, understanding the purpose of the study and examining the researcher’s method (Carr, 1994). Moreover, the researcher’s knowledge of both types of research approach endorse accurate selection of the methodology for the problem identified (Carr, 1994). Research methods are selected that facilitate to plan a study systemically, to collect data and investigate information (Boyd, 2001). Qualitative and Quantitative are the two major research methods or approaches used in nursing studies. “ Qualitative is a systematic, interactive and subjective approach used to

describe life experiences and give them meaning” (Burns & Grove, 2006, p. 35). This type of research is conducted to describe and promote understanding of human experience such as stress. While, “ Quantitative research is a formal, objective, and systematic process in which numerical data are used to obtain information about the world” (Burns & Grove, 2006, p. 35). The example of quantitative research question: what is the prevalence of drug abuse in Pakistan”? Both approaches are needed to provide knowledge in nursing discipline. They are also characterized by ontological and epistemological differences to conceptualize and conduct research.

Philosophy of Qualitative Research

Philosophy of qualitative research is “ interpretive, humanistic, and naturalistic” (Creswell, 2007). It places significant importance to the subjectivity. The ontological assumption is that there is no single reality but encompasses multiple realities for any phenomenon (Speziale & Carpenter, 2003). Moreover, every individual perceive, interpret and experience a situation or phenomena of interest from one own point of view, since individual has different experience of reality (Polit & Beck 2008). The epistemological assumption is that knowledge developed from subjective observation, which is at the level of rich description, and in-depth understanding (Speziale & Carpenter, 2003). According to Creswell (2007), qualitative researchers believe that “ truth is both complex and dynamic and can be found only by studying persons as they interact with and within their sociohistorical settings” (p. 89). Therefore, qualitative research, phenomena can best understand and sort by embedding researcher in the situation

rather than quantifying data that require a construction of a fixed instrument or a set of question (Speziale & Carpenter, 2003). Furthermore, it is context and time bound (Polit & Beck 2008). Qualitative study is generally conducted in the naturalistic setting rather than in the artificial laboratory (Burns & Grove, 2006). Researcher interacts with the participants explore perceptions, feelings, thoughts, beliefs, expectations, and behavior to obtain knowledge about the phenomena of interest so researchers has an active part in the study (Burns & Grove, 2006). This approach encompasses well-planned steps before researcher enters the settings in which observations and inquiries would be made (Speziale & Carpenter, 2003). The focus of qualitative research is usually broad not reductionistic because the intent is to give meaning to the whole (Polit & Beck 2008). In this approach, data is collected through in-depth conversations, diary keeping, extensive interviewing, extended observation, and focus groups interviews to acquire insights regarding these subjective realities, so no attempts are made to control interaction (Polit & Beck 2008). Qualitative data take the form of words so researchers keep a detail notes, and record the interviews than identifies categories that help to sort and organize the data (Creswell, 2007). The intent for the organization of the data is to have individualized interpretation that describes the phenomenon being studied (Creswell, 2007). Moreover, researcher spends substantial time going back and forth through the notes that would help to identify important connections (Polit & Beck 2008).

Quantitative approach is emerged from positivist paradigm. Positivist paradigm places considerable value on “ rationality, objectivity, prediction and control” (Burns & Grove, 2006, p. 15). “ The ontological assumption is

that there is one reality, which exists and can be validated through the senses" (Brink & Wood, 2001, p. 22). Epistemological assumption is that knowledge can be define and explore through careful measurement of the phenomenon of interest. Researchers believe that " all human behavior is objective, purposeful, and measurable" (Brink & Wood, 2001, p. 22). It encompasses the study of research questions or hypotheses that identify prevalence and characteristic of the concept, test the relationship, assess cause and effect relationship between variable and tests for intervention effectiveness (Polit & Beck 2008). The researcher needs to find or develop the instrument or tool to measure the phenomenon of concern while researcher remain detached from the study in order to prevent personal values and biases to influence the study results (Polit & Beck 2008). Research is driven by numerical data collection than it is subjected to statistical analysis. The focus or perspective for quantitative research is usually concise and reductionistic which means whole cannot be studied but it will be broken down into parts so that the parts can be examined (Polit & Beck 2008). Furthermore, " Quantitative research requires control to identify and limit the problem and attend to limit the effect of extraneous or outside variables that are not the focus of the studies" (Burns & Grove, 2006, p. 132). Control, instrument and statistical analyses are used to ensure that the research findings accurately reflect reality and that would help to make the finding generalize (Brink & Wood, 2001). The four quantitative research designs used most often in nursing research are descriptive designs, correlation designs, experimental designs and quasi-experimental designs (Burns & Grove, 2006)

The methodology chosen depend on what one are trying to do; researcher purpose and question to investigate rather than commitment to a particular paradigm (Brink & Wood, 2001). Thus, the methodology must match a particular phenomenon of interest. My thesis topic: Stress and Coping among first year master students at Aga Khan University (AKU). I have selected quantitative approach because I am interested to identify factor that causes stress among first year master student at Aga Khan University and explore the coping strategies used by the students. Moreover, it helps to investigate the stress level among different entities of AKU such as School of Nursing, Medical College and Institute of Education development. The finding from the study recommends possible strategies that would assess future students dealing with the stress so that they are able to cope more effectively. The research design guides the researcher in planning and implementing the study in a way that is most likely to achieve the intended goal (Polit & Beck 2008). Skill in selecting and implementing a research design can improve the quality of the study and thus the usefulness of the findings; therefore, to achieve that purpose Descriptive Cross-sectional design would be selected. It is appropriate for “ describing the status of phenomena or for describing associations among phenomena at a fixed point in time” (Polit & Beck, 2008, p. 166). The overall aim is to ‘ discover new meaning, describe what exists, determine the frequency, and categorize, count, or measure information’ (Burns and Grove, 2006, p. 24). In quantitative descriptive research, data is obtained from many participants under natural conditions, with no attempt to manipulate the situation (Brink & Wood, 2001). To illustrate, a descriptive study, I have formulated following research questions that include “ what are the sources of stress among first year master student at AKU”. “ What are

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the difference between stress level among first year master students at School of Nursing, Medical College and Institute of Education development”?

“ What are the coping strategies use to manage stress by master students of AKU”? In a quantitative study, researcher starts with a theory, framework or conceptual model. I have selected Roy adaptation model. In quantitative study, researcher follows step-by-step process by posing a question to the end by obtaining an answer. All the findings together provide a composite picture related to the number of student suffering from stress, the factors that cause stress among students, stress copying strategies among students and finally comparing the stress level of different entity at AKU. It has been clearly stated in the research topic and question that the study setting would be Aga Khan University. It has School of Nursing, Medical College and Institute for Education development. These entities offers different masters programme which include Master of Science in Nursing, Master in Bioethics, Master in Epidemiology and Biostatistics, Master in Health Policy and Management and Master of Education Programme. The universal sampling would be planned. The information would be obtained from all those who are in the first year Master programme at AKU 2010-2011. Taking the entire study sample reduces the sampling error (Polit & Beck 2008). The major study variables are stress and coping. A tool “ student stress and coping inventory” is selected for the study. This tool is develop and tested by Barbara Jaffin Cohen, (2001). This tool is selected because it assesses the major variable of the study. It is also planned that tool would be pilot tested to check its utility and appropriateness in the local context. A pilot study is a crucial element of a good study design, area of concern, lesson learn and refinements needed are identified (Por, 2005). Quantitative information is

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analyzed through statistical procedure. It covers broad range of techniques; from simple that is use regularly to compute the average through computer to complex and sophisticated method. Researcher use statistical procedure to organize, interpret and communicate numeric information (Polit & Beck 2008). I have plan for descriptive statistic to describe and synthesize data.

Conclusion

According to Clarke (1998), “ research methods can be described, considered and classified at different levels, the most basic of which is the philosophical level”. All nursing research is conducted within philosophical paradigm because it help investigator to understand explicitly the philosophical assumptions underlying their methodological choices (Steven & Edwards, 2008). Proctor (1998) considers that consistency between the aim of a research study, the research questions, the chosen methods, and the personal philosophy of the researcher is the essential underpinning and rationale for any research project.