Framework of Intent For Selecting Research Approaches in Nursing

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Abstract
Research in nursing is growing rapidly, and there is increased use of qualitative and mixed methods approaches to investigations. However, frequently researchers’ adopt a research approach with little understanding of the philosophical assumptions underpinning their choice. Using a framework of research intent, this paper aims to identify the different philosophical assumptions associated with different research intents and therefore provide a foundation for more informed decision making in selection of methodologies.

Key words: Nursing research, research methodologies, research approach, research intent, research philosophy

Increasing interest in qualitative methods has seen a rapid growth in textbooks giving a “recipe” approach to doing qualitative work. Consequently many nurses use these methods unaware of the underpinning assumptions, and therefore are at risk of using them inappropriately. This paper explores the maze of research methodologies and offers a structure of research intent as a key to selecting the most appropriate approach for nurses to adopt for their work.

Before exploring the foundations underpinning different methodologies, there is a need to clarify what is inferred by the term methodology. Cuelli et al. (2003) described methodology as involving three elements: beliefs about knowledge; theoretical framework guiding the research; and a concern to construct a particular type of knowledge. They further described methods as “the tools, techniques, or procedures used to gather the evidence (p. 6)”. Methods therefore are determined by the selected methodology.

All research is guided by philosophical understandings about how we know and make meaning of things, of how we determine the ‘truth’ value of information we receive; some of these philosophical understandings are obvious and others are unconsciously held. It is important to look at the philosophical assumptions underpinning different research methodologies because these assumptions shape our understandings and subsequently the ways we go about exploring our world.

It may be helpful to think about the various philosophical traditions as represented by spectacles, each pair of spectacles having different types of lenses. When we put on a pair of spectacles the view we have of the world around us is affected. The lenses can focus our view in particular ways - tinted lenses provide a particular hue, some lenses magnify our view, others give a more wide-angled view - and, importantly, some spectacles may be painful to look through while others will feel perfect and fit comfortably with the way we want to view the world.

It is popular in the health sciences to divide research in two distinct types: either quantitative or qualitative (so this suggests a limited set of research spectacles- only 2). This division separates 'traditional' science from other approaches. Quantitative approaches are usually characterised as using the scientific method, involving numbers, statistics and hypotheses to produce objective knowledge that can be generalized, often termed ‘hard science’. In contrast, qualitative approaches are characterised as naturalistic, subjective, involve text and are context dependent. These approaches are often referred to as ‘soft science’. This paper, while accepting this broad classification, challenges this way of viewing research as too narrow. John Law (2004) wrote about methods as ‘messy’ – he argues that doing research is never as simple as the textbooks might suggest – researchers review and revise the steps as we work.

There are many ways of understanding the world around us. It is unhelpful to create a division between 'hard' and 'soft' science. Firstly it creates tensions where one type of research is seen as better than another. Secondly, the world we live and work in is complex, so too are the methods we need to use to capture that complexity. Therefore, we need to view research within a framework that values the knowledge gained from the multiple ways available to explore our world.

Framework of Research Intent
A number of writers have suggested frameworks for grouping the various approaches (methods, designs) that researchers employ in their work (Lather 1991, Denzin & Lincoln 2005). Lather’s suggestion to think about the intent of the researcher is helpful, and her four broad categories are: to predict, to interpret, to emancipate and to deconstruct.

By using a framework of research intent, our interests shift from the opposition between hard and soft sciences to a discussion about the most appropriate way to meet that research intent. For example, if a researcher has the intent of demonstrating that one type of nursing intervention is more effective than another, the intent is different from that of a researcher who wants to explore the collaboration between health professionals in supporting home-based care. Both these investigations will potentially benefit nursing and the health of the community and discover 'new' knowledge, but each has a fundamentally different intent. By focusing on intent, all research approaches are valued, because of the different contributions they bring to
the development of nursing knowledge and practice, rather than focusing a competitive divide that suggests one approach is better than another.

The following Figure 1. identifies different research intents (Lather 1991), and the corresponding research methodologies (see for example Grant & Giddings 2002). This is not a complete listing of different research methodologies, but represents the more frequently used approaches in nursing and health research.

**Figure 1. Different Research Methodologies and Approaches in Nursing and Health Research**

**Framing Research within a philosophical view**

The following exploration of each of the research intents uses a framework suggested by Maykut and Morehouse (1994) to identify underlying philosophical assumptions (Table 1.).

**Table 1. Underlying Philosophical Assumptions in Nursing and Health Research**

<table>
<thead>
<tr>
<th>Areas of Philosophy</th>
<th>Questions</th>
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</thead>
<tbody>
<tr>
<td>1. <strong>Ontology</strong> raises questions about the nature of reality</td>
<td>What is the nature of the world? What is real? What counts as evidence?</td>
</tr>
<tr>
<td>2. <strong>Epistemology</strong> is interested in the origins and nature of knowing and the construction of knowledge</td>
<td>What is the relationship between the knower and the known? What role do values play in understanding?</td>
</tr>
<tr>
<td>3. <strong>Logic</strong>, as it relates to research, deals with principles of demonstration and verification</td>
<td>Are causal links between bits of information possible?</td>
</tr>
<tr>
<td>4. <strong>Teleology</strong> is generally concerned with questions of purpose</td>
<td>What is research for?</td>
</tr>
</tbody>
</table>

**Intent to predict**

Research using a predictive approach has an emphasis on careful and controlled measurement as the basis of knowledge. The researcher remains detached and independent of the situation under study. Knowledge is considered as objective, can be generalised to other situations and importantly, is useful in predicting and controlling future events.

Research approaches with the intent of prediction are frequently called positivist or empirico-analytical research. Positivism is a philosophical approach of the modern era, and is clearly associated with the technological advances characteristic of our time. Cohen et al. (2007) describe positivism as a philosophical position that knowledge can only be “advanced by means of observation and experiment (p.9)” and this view has become the dominant way of thinking about knowledge in the past century.

Researchers working within a predictive intent aim to predict future events, and assume that knowledge is based on discoverable and understandable facts which are independent of social or historical context. There is a belief that truth is attainable and linear, and that causal relations can be identified. Table 2 presents the main assumptions underlying predictive research.
Table 2. Questions and Response Related To Predominant Assumption Underlying Predictive Research.

<table>
<thead>
<tr>
<th>Question</th>
<th>Predictive researcher response</th>
</tr>
</thead>
<tbody>
<tr>
<td>How does the world work?</td>
<td>Reality is one. By carefully dividing and studying its parts, the whole can be understood.</td>
</tr>
<tr>
<td>What is the relationship between the knower and the known?</td>
<td>The knower can stand outside of what is to be known. True objectivity is possible.</td>
</tr>
<tr>
<td>What role do values play in understanding the world?</td>
<td>Values can be suspended in order to understand.</td>
</tr>
<tr>
<td>Are causal linkages possible?</td>
<td>One event comes before another event and can be said to cause that event.</td>
</tr>
<tr>
<td>What is the possibility of generalisation?</td>
<td>Explanations from one time and place can be generalised to other times and places.</td>
</tr>
<tr>
<td>What does research contribute to knowledge?</td>
<td>Generally, the predictive researcher seeks verification or proof of propositions.</td>
</tr>
</tbody>
</table>

The hallmark of research with the intent to predict is the use of the *scientific method*. This refers to the system of rules, procedures and standards which facilitate maximising the confidence researchers have in the validity of their findings. The key characteristics of scientific methods are control, operational definition, replication and hypothesis testing. Scientific method, in the main, relies on the systematic identification of hypotheses and subsequent use of empirical tests. These are repeated to demonstrate that the results are consistent each time, and this increases confidence in the knowledge gained. Common predictive research designs in nursing research are experimental and quasi-experimental designs and surveys.

**Research with the intent to understand**

An *interpretive* approach to inquiry encourages researchers to view social reality as constructed out of different social perspectives. Simply put social constructionists recognize that all social facts, even those as apparently objective as a medical diagnosis, are not simply discovered but created through social norms, and that these norms may differ from one social group to another (Holloway 2005).

In contrast to research with a predictive intent, working with the intent to understand researchers aim to interpret the experiences and world view of others from other’s point of view (Blanche et al. 2008). The predominant assumption underlining interpretive research is that knowledge is gained through understanding and describing people’s worlds from their view. This understanding is dependent on the social and historical contexts in which these people live (subjective). Table 3 shows the predominant assumption underlying predictive research.

Table 3. Questions and Response Related To Predominant Assumption Underlying Interpretive Research

<table>
<thead>
<tr>
<th>Question</th>
<th>Predictive researcher response</th>
</tr>
</thead>
<tbody>
<tr>
<td>How does the world work?</td>
<td>Multiple realities can only be studied holistically, and prediction and control are unlikely difficult to obtain.</td>
</tr>
<tr>
<td>What is the relationship between the knower and the known?</td>
<td>The knower and the ‘subject’ interact to influence each other.</td>
</tr>
<tr>
<td>What role do values play in understanding the world?</td>
<td>Values mediate and shape what is understood.</td>
</tr>
<tr>
<td>Are causal linkages possible?</td>
<td>Not possible to separate cause from effect.</td>
</tr>
<tr>
<td>What is the possibility of generalisation?</td>
<td>Inquiry develops a body of knowledge in the form of working theories.</td>
</tr>
<tr>
<td>What does research contribute to knowledge?</td>
<td>Generally, the interpretive researcher seeks to discover or uncover propositions.</td>
</tr>
</tbody>
</table>

Interpretive research (intent to understand) does not operate within the same controls of predictive research. Interpretive work holds a common set of features which may be incorporated into research design in various ways. Whilst the following list is representative of the characteristics of interpretive research, not all projects will use them all.

- use natural settings;
- researcher as the key instrument for collecting data;
- multiple sources of data – for example interview, observation and documentation;
- inductive data analysis;
- openly value subjective experiences of people as a source of knowledge;
- emergent design where the decisions about the research plan adapt to the context of the research as it develops, and
- avoids disturbing the processes of social life (Creswell 2009 & Thorne 2008).
The two principal strategies for collecting data in this form of research are interview and observation.

**Interviewing**

Interviewing is a technique for collecting data (Minichiello et al. 2004; Kvale & Brinkmann 2008) and can be used in all research approaches, but intent influences how interviews are conducted. Interpretive interviews can range on a continuum from structured to unstructured format. The key to interpretive interviews is establishing rapport with participants and allowing them to present their view of their experiences of the topic being investigated (Minichiello et al. 2004; Kvale & Brinkmann 2008).

**Observation**

Observation is the other main data collection technique that fosters understanding of the participant’s world view. Observation ranges from purposeful observation in the field to observing behaviour during an interview (Creswell 2009).

**Participant observation** is the method of observation most frequently used in interpretive research and involves an investigator taking part in the activities of the particular setting and additionally, carefully recording observations of what happens during this participation. Participant observation can be either covert or overt and may range from marginal involvement in the setting to total participation in all aspects of the setting. It is important that a skilled observer is prepared and rigorous in their documentation and analysis of observational data (Creswell 2009).

There are a large number of designs used in interpretive research where specific conventions guide the research. Many nursing texts list phenomenology, grounded theory, ethnography and historical research as common designs with an interpretive intent. Sampling in interpretive research is guided by the purpose of the study (Roberts & Taylor 2002). The number of participants in research with this intent is frequently small and determined by the amount of information available. The participants are sought to provide high-quality case descriptions, in sufficient numbers to identify shared patterns of commonalities (Mack et al. 2005).

Research with an interpretive intent guides projects where in-depth understanding of the everyday world view of participants is explored. The principal assumptions underpinning this approach relate to the value of subjective experience, and knowledge is dependent on context. The use of field work data collection strategies (interviewing and participant observation) help understand phenomena in context. There are many ways in which interpretive research can be approached, yet common to all these approaches is the involvement of the researcher in the lives of participants and an unfolding of design as the phenomena are explored.

**Research with the intent to emancipate**

Research with emancipatory intent aims to critique and transform structures that constrain and exploit people. This is achieved by engaging people in situations where they can become aware of their unconscious ways of thinking which lead and sustain oppressive structures.

Researchers using this approach seek change. An illustrative example is a study exploring consumer partnerships in nursing care in acute care settings. This study used a critical ethnographic approach to engage health professionals and consumers in reflection about the level of participation consumers had. Nurse participants identified ways their usual practices constrained partnerships and began introduce change in practice to increase collaboration with consumers (Penney & Wellard 2007).

The major assumption underpinning emancipatory intent is that it is possible to engage people in a process of critique of their world view and in turn use that critique to offer an opportunity to transform their world. This transformation is referred to as emancipation. Table 4 shows the predominant assumptions underlying emancipatory research.

<table>
<thead>
<tr>
<th>Question</th>
<th>Predictive researcher response</th>
</tr>
</thead>
<tbody>
<tr>
<td>How does the world work?</td>
<td>Reality is shaped by social, political, cultural, economic, ethnic and gender values, which are crystallised over time.</td>
</tr>
<tr>
<td>What is the relationship between the knower and the known?</td>
<td>The knowers are often unaware of the knowledge guiding their actions.</td>
</tr>
<tr>
<td>What role do values play in understanding the world?</td>
<td>Values of the researcher are included, become joined with the participants.</td>
</tr>
<tr>
<td>Are causal linkages possible?</td>
<td>Not possible to separate cause from effect. Desire to create change and action is possible.</td>
</tr>
<tr>
<td>What is the possibility of generalisation?</td>
<td>Generalizations can occur when the mix of social, political, cultural, economic, ethnic and gender circumstances and values are similar settings.</td>
</tr>
<tr>
<td>What does research contribute to knowledge?</td>
<td>Knowledge grows &amp; changes through dialogue where there is a continuous erosion of ignorance and development of more informed insights.</td>
</tr>
</tbody>
</table>

Emancipatory research approaches share many of the features of interpretive approaches, but have the added interest in understanding the power relations that influence the actions and thoughts of people (Polit & Beck 2010). Interviewing and observation are techniques used in data collection, but these techniques are used differently.

The role of participants in the research process is important in emancipatory research. Participants are seen as equals with the researcher and, therefore, are instrumental in any action or change that arises from the research. Reciprocity is vital in participatory research. Reciprocity refers to mutual exchange between the researcher and participants, indicating researchers give
something to participants at the same time as they request participants share their life experiences. Therefore, research with an emancipatory intent moves beyond acknowledging the subjective views of participants to a mutual interdependence of participants and researchers. The roles move away from that of a separation of the researcher and the researched, to the adoption of co-researcher roles for all (Mertens 2008).

Through reciprocity researchers are able to move from being a stranger to friend and therefore more personal intimate sharing of stories becomes a feature of the data collection. This facilitates greater depth in data collection. The following steps are helpful in developing reciprocal research methodology:
- self-disclosure on the part of the researcher;
- individual and small group interviews encourage collaboration;
- negotiating meaning with participants; and
- discussion of false consciousness.

It may be helpful to consider research design with an emancipatory intent as a family of critical approaches. These designs do not prescribe steps but, as discussed in the interpretive area, they provide a framework for developing specific designs suited to the context of each project. Emancipatory interests are central to this research intent and also the cause of criticism of the approach.

Research with an emancipatory intent has been attractive in nursing as a way to free nurses from oppressive structures which constrain their practice. Based in critical theory, these approaches engage researchers and participants to work together in critical evaluation of their world and invite subsequent change. There is a fundamental belief that people are guided by false consciousness which, when exposed, will aid change. Using the tools of interview and observation emancipatory research works toward reciprocal interaction to challenge current practices and develop actions for new practices.

**Research with the intent to deconstruct**

Deconstructive approaches to research represent an epistemological break from other research approaches, and seek to challenge our understandings of knowledge as tied to ‘truth’. These approaches work from recognition that claims to know things are governed by privileged sets of rules and social relations. For example, in the clinical setting the ‘truth’ about what is acceptable practice is governed in part by the senior nursing staff in the various environments, their rules and beliefs establish what is ‘right’.

A poststructuralist approach, following French philosopher Michel Foucault, focuses on questions of power, how it works and how we contribute to existing power relations. Work in this context calls attention to the research process itself as a method for creating knowledge. Methods of discourse analysis ‘cross-examine’ knowledge in terms of questions about ‘who speaks, for whom and by what authority?’ (Cheek 2000).

Many nurses have been attracted to the use of deconstructive methodologies. Using a range of designs with different 'labels', nurses have sought novel ways to deconstruct nursing practice. There are unclear boundaries between the deconstructive and emancipatory approaches. Riley and Manias (2006) used deconstruction methods to interrogate the way in which practices in the operating room environment were created.

The major assumptions underpinning research with the intent to deconstruct are in part shared with emancipatory approaches. In addition, these approaches challenge the ways we think about the world. Deconstruction as a research intent undermines the claims of universal truth and uses theoretical tools to 'make the familiar strange' (Thomson & Wellard 1999). Table 5 shows the predominant assumptions underlying deconstructive research.

**Table 5. Questions and Responses Related to Predominant Assumptions Underlying Deconstructive Research**

<table>
<thead>
<tr>
<th>Question</th>
<th>Predictive researcher response</th>
</tr>
</thead>
<tbody>
<tr>
<td>How does the world work?</td>
<td>Reality is constituted in and through language.</td>
</tr>
<tr>
<td></td>
<td>Representations of reality are just that-representations-which have become familiar through ideology.</td>
</tr>
<tr>
<td>What is the relationship between the knower and the known?</td>
<td>Meanings are discursive (in language) and plural, there is no fixed meaning. Meaning changes, depending on context.</td>
</tr>
<tr>
<td>What role do values play in understanding the world?</td>
<td>Values are constantly contested, contradictions are evident between the values of researcher and researched. Contradictions are evident within an individual—contrary values are produced through ideologies of - gender, race, class, ethnicity etc.</td>
</tr>
<tr>
<td>Are causal linkages possible?</td>
<td>There is no fixed meaning; meaning shifts.</td>
</tr>
<tr>
<td>What is the possibility of generalisation?</td>
<td>Challenges totalising or unified understandings. The approach sees these as partial, attempts to locate dominant interests and the ways they are produced and maintained.</td>
</tr>
<tr>
<td>What does research contribute to knowledge?</td>
<td>It looks at how knowledge is constructed; questions the foundations and frameworks of knowledge.</td>
</tr>
</tbody>
</table>

Julianne Cheek (2000) argued that deconstruction methodologies include:
- a concern with the role of power in establishing language and our ways of communication;
- an interest in the construction of subjectivity;
- an awareness of subjectivity is multiple and continually challenged;
- a concern to unpick and analyse relationships of power in social organisations, and individual awareness; and
- a scepticism towards explanations that attempt to provide all encompassing answers.

Researchers using this approach are interested in discourse, subjectivity, power and the position of the
research in the research process. Specific designs in this area of research intent, as in the other approaches, are diverse. A list might include the labels of postcritical, postmodern, and poststructural. The specific designs are not of primary concern for our purpose; rather we note that any design that employs the characteristics discussed above has the intent of deconstruction.

**Using intent to select research methodologies**

Following the overview of the key assumptions in the framework of intent, the question remains of how these different research intents can be useful in research related to clinical problems. This final section aims to demonstrate how each of the research ‘intent’ categories can assist in developing knowledge and the formation of nursing practice by identifying the different questions that might be asked associated with a clinical problem.

**Pressure ulcers in spinal cord injury**

Pressure ulcers occur as a result of sustained pressure on skin over bone which causes diminished blood supply leading to tissue anoxia and subsequent damage of the skin and underlying tissue (Reddy et al. 2008, Joanne Biggs Centre for Evidence-Based Practice 2008). Whilst it is widely acknowledged that causation of pressure sores is multifactorial, the principal factors are pressure and shearing force. People with spinal cord injury are highly susceptible to pressure ulcers due to loss of motor and sensory function. When people with spinal cord injury have pressure ulcers they currently require intensive and extensive treatment, which usually involves long hospital stays. The discussion below suggests how a researcher using each of the different research intents might proceed.

**Predictive**

A predictive approach to this issue might begin with determining antecedent causes that distinguish patients who get pressure ulcers from those who do not. Two groups would be established, those with pressure ulcers and those without. The groups would have similar characteristics, perhaps age, gender, and type of spinal cord injury (for example, paraplegia). The investigation would draw on previous research, which provides possible explanations for occurrence of pressure ulcers (these might include immobility, poor nutrition, incontinence and socio-economic factors). Using these explanations as a guide, hypotheses would be formulated and subsequently data collected from both groups in a structured and impersonal way. Data in this study might include physiological measures of nutritional status, or measures of mobility and pressure on sacral area, or assessment of urinary management. The investigation would attempt to compare these factors in the group with pressure ulcers with the group without ulcers. Results would be published with the aim of contributing to improved prediction of pressure ulcer development in this population.

**Interpretive**

The use of an interpretive approach would focus on understanding the experience of having a pressure ulcer from the perspective of the person with the ulcer and possibly involve their family and friends. The researcher might conduct interviews with a number of people who have had pressure ulcers to explore factors they believe contributed to the development of the ulcer. Observation of life at home and in hospital may further enhance understanding of their experiences. The investigation may possibly look at previous work in this area to assist in analysis. The report will summarise what participants said and include quotation from the interviews. The findings will be published to the wider research community and also shared with participants.

**Emancipatory**

The use of an emancipatory approach could develop dialogue between the patients and the staff. The investigation would ask questions from a critical perspective and perhaps explore the way in which patient education and support might contribute to the challenging hospital management of pressure ulcers. Using focus groups, discussion of the issues that contribute to the development of pressure ulcers and their subsequent management could be identified. Contradictory views between the various participants would be explored. This would facilitate shared understanding between all of those involved in managing pressure ulcers. The groups could then work together to formulate action plans for resolving the identified issues. The results of this investigation will be developed collaboratively and disseminated to others for whom the issue might have relevance (for example, other spinal units and patient groups).

**Deconstruction**

A researcher using a deconstructive approach would look at how the care and treatment of pressure ulcers is culturally constructed, that is, spinal cord injury is a disease and pressure ulcers a complication of that disease. Questions might be raised about what is seen as 'normal' and how the patient with spinal cord injury is 'constructed' as a subject of health professionals' interest. There may be critique of the caring practices of health care professionals, including the power relations established within the institutional setting. The study could lead to a more complex understanding of the interplay between the competing interests of both staff and patients. The research might interrogate past practices for management of pressure ulcers in people with spinal cord injury and how these practices contribute to the maintenance of the dominant ways of seeing individual patients responsible for the complications they experience.

Pressure ulcer management could be explored from all four perspectives. Indeed, the research group the first author worked with used three of the four approaches in our work. The purpose of this example was to highlight possibilities and the brevity of the discussion limits the examination of the very many other ways these issues could be explored. However, these examples illustrate the differences in the way an issue might be approached using each of the research intents explored in this chapter.

**Conclusion**

In this paper, the aim was not to provide extensive detail of each approach because this is widely available in the literature. We have tried to provide the broad brushstrokes that create the picture of each approach. The challenge for researchers investigating contemporary health care practices is to ensure that the methods adopted in their research match the intent and philosophical assumptions embedded in that approach. A failure to consider these aspects raises concerns about the validity of the findings of the research.

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