



## Nursing Intervention Research

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A major goal in health care today is to improve outcomes and deliver high-quality patient care. Nursing, as a healthcare profession, must develop and provide clinical nursing practices that demonstrate solid research evidence. Clinical or nursing intervention research is defined as

Studies either questioning existing care practices or testing innovations in care that are shaped by nursing's values and goals, guided by a strong theoretical basis, informed by recent advances in science, and designed to improve the quality of care and health of individuals, families, communities, and society. (Naylor, 2003, p. 382)

This approach involves a unique research process of designing, implementing, evaluating, and disseminating nursing interventions that are appropriate and effective in addressing the presenting patient problem. In this article, each phase of this process will be presented and described, with application to oncology nursing.

### Designing Nursing Interventions

Developing nursing interventions may be challenging. However, this phase of nursing intervention research is critical, and thorough attention and effort should be done in creating an intervention based on a comprehensive understanding of the topic of interest and the theoretical foundation. Nursing interventions can be defined as any treatment, therapy, procedure, or deliberate cognitive, physical, or verbal activity that is based on scientific rationale and performed with or for an individual or family for stated goals that are beneficial for the patient (Bulechek & McCloskey, 1992; Burns & Grove, 2004; Sidani & Braden, 2011). Nursing inter-

ventions can be simple or complex. A simple intervention is characterized by a low level of complexity and includes one component aimed at one specific problem (Sidani & Braden, 2011). A complex intervention is characterized by a high level of complexity and is comprised of multiple components that are aimed at different aspects of the same problem or different inter-related problems. According to a Medical Research Council report, elements of complexity include number of and interactions between components within the experimental and control interventions, number and difficulty of behaviors required by those delivering or receiving the intervention, number of groups or organizational levels targeted by the intervention, number and variability of outcomes, and degree of flexibility or tailoring of the intervention (Craig, Dieppe, Macintyre, Nazareth, & Petticrew, 2008). Other elements that may contribute to the complexity include time involved and number of individuals required to complete the intervention (Polit & Beck, 2012).

Although situational variations may exist, Polit and Beck (2012) have developed a list of ideal features for nursing interventions. An ideal nursing intervention would be salient, efficacious, safe, conceptually sound, cost effective, feasible, developmentally appropriate, culturally sensitive, accessible, acceptable, adaptable, and readily disseminated. To achieve an ideal intervention, completion of critical components of the design process are essential and will ensure a well-developed intervention that is amenable to testing and will contribute to nursing practice. These components include defining the patient problem and patient population; selecting a theoretical framework; identifying patient outcomes and defining measures; and developing intervention

content and delivery methods that may include dose, timing, frequency, duration, intensity, and setting (Aranda, 2008; Polit & Beck, 2012).

The initial step in developing a nursing intervention is the selection of the patient problem and population and acquisition of in-depth knowledge (Aranda, 2008; Polit & Beck, 2012). Characteristics of the patient problem and population should be an area of researcher interest and passion and a common practice concern. The targeted population should be fairly specific because this will guide knowledge acquisition and, later, sample recruitment for intervention testing. Gaining an in-depth understanding of the problem may be achieved through a literature search, targeting descriptive research and systematic reviews that not only analyze the specific patient problem, but also examine other similar interventions. In addition, discussions with colleagues and experts in the area of interest may increase the researcher's insight and comprehension of the topic (Aranda, 2008; Polit & Beck, 2012).

Selection of a theoretical, conceptual basis comprises the next step in the development of a nursing intervention. The theoretical framework is critical to defining the construct validity and providing intervention justification. The theoretical framework should be reflected in key elements of the nursing intervention and ultimately will facilitate interpretation of the intervention by the nursing community (Aranda, 2008).

On completion of these activities, attention and detail to desired outcomes will provide structure and direction in

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the design process. Numerous examples exist in the literature that are specific to a vast array of patient settings and problems. The Oncology Nursing Society (ONS) has been a leader in the development of nurse-sensitive outcomes in cancer nursing and has long recognized the importance of patient outcomes as a means of improving care (Stanley, 2006). Five categories of nurse-sensitive outcomes defined by ONS are symptom experience, function status, safety, psychological distress, and economics of healthcare utilization. Each outcome will necessitate selection and planning for measurement. Instruments should possess validity and reliability and have the capability of use in the desired population and the capability to detect changes in patient outcomes (Aranda, 2008).

The next phase is the actual development of the intervention content based on the acquired knowledge, theoretical framework, and selection of the desired outcomes and measurement methods. The content should be explicit and address dosing, intensity, timing, frequency, duration, and setting for the nursing intervention (Polit & Beck, 2012). Sidani and Braden (2011) propose the use of an algorithm that facilitates tailoring of the intervention content with the use of “if-then” statements in the decision-making process. This methodic procedure will contribute to overall accuracy in the description of the intervention and eliminate confounding factors.

## Implementation

The next phase of intervention research is implementing the constructed nursing intervention. The most appropriate approach is the completion of a pilot test or study (Polit & Beck, 2012). The main objective for pilot testing is to examine the feasibility of the intervention in clinical practice. The pilot study also will identify potential benefits of the intervention and areas that necessitate modification. Analysis of practicalities in participant recruitment and retention, usability of the intervention materials, participant acceptance or preferences of the intervention, and attrition are some of the many components that must be assessed and refined as needed to facilitate a solid progression into the next phase of intervention research involving the actual completion of the randomized, controlled trial (RCT).

## Evaluation

The previous phases of the nursing intervention research process may appear laborious and tedious. However, these phases ultimately will be viewed as “time well spent” and provide a solid, scientifically based nursing intervention that has been well prepared and is ready for the rigor of an RCT. The goal of this phase, involving execution of the RCT, is to perform a full testing of the nursing intervention compared to an alternative protocol, standard of care therapy, or placebo/control group under controlled conditions (Polit & Beck, 2012). This phase assesses the efficacy of the intervention with a homogeneous or heterogeneous sample population and may include a single- or multi-site research setting. Depending on the complexity of the study, this may involve factorial designs, crossover studies, cluster trials, or mixed-methods studies (Forbes, 2009). These types of studies may compare the different elements if the intervention has multiple components.

The second phase in evaluating the nursing intervention is the completion of multiple RCTs that assess the effectiveness of the intervention in uncontrolled settings. The goal is for replication of the effects with different populations and various settings. This phase of evaluation also may provide cost analysis and longitudinal effects of the intervention.

## Dissemination

As with any research, dissemination to the educator, practitioner, and researcher community in nursing is critical. This particularly is important with nurse intervention study findings because health care is demanding more accountability to funding sources, with increased competition for resources (Naylor, 2003). In addition, dissemination in refereed journals should include details about the theory and the method to allow for study replication and comparison studies with similar interventions (Broome, 2012). Not only should nursing intervention studies be published in refereed journals, but translations of nursing interventions also are needed in an alternative format more readily applicable for practitioners and educators (Sidani & Braden, 2011). The translation process involves the review

of the evidence for the intervention and the translation of the evidence into pertinent clinical practice nursing guidelines for clinical and educational settings. The development of specific guidelines will promote acceptance in practice, reinforce the effects of the intervention, and facilitate approval by health policy decision makers.

## Application to Oncology Nursing

In this issue of the *Oncology Nursing Forum*, Martinez et al. (2015) present a secondary data analysis of an RCT examining a nursing psychoeducational intervention for patients with advanced breast, colorectal, lung, or prostate cancer and their family caregivers, comparing healthcare service use among three groups that included a brief intervention, extensive intervention, or control that comprised standard care. The intervention, or FOCUS program (family involvement, optimistic attitude, coping effectiveness, uncertainty reduction, and symptom management), included a brief program that consisted of three contacts, including home visits and a phone session, and an extensive program that consisted of six contacts. The content of both programs was the same, but the brief program was condensed into 3.5 hours and the extensive program was 7 hours (Northouse et al., 2013). Two prior RCTs have been conducted examining the nursing intervention with patients with cancer and their family caregivers (Northouse, Kershaw, Mood, & Schafenacker, 2005) and patients with prostate cancer and their family caregivers (Northouse et al., 2007). Martinez et al. (2015) provide an excellent example of nursing intervention research with patients with cancer and extend nursing knowledge and support of the nursing intervention, exploring the intervention in heterogeneous groups in multiple settings. The authors have demonstrated efficacy and effectiveness of the intervention, and in this latest research exploring possible deleterious effects with healthcare utilization burden, results indicated that the nursing intervention did not increase healthcare use.

## Conclusion

Nursing intervention research is an important research method to advance oncology nursing knowledge and ensure that nursing practice is based on

scientific evidence. Martinez et al. (2015) have provided an exemplar for other nurse researchers in oncology to develop nursing interventions that will result in positive patient outcomes and enhance quality health care.

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