Challenges in & Prospects for Clinical Nursing Research

Hesook Suzie Kim, PhD, RN
Professor Emerita, University of Rhode Island
College of Nursing
&
Professor II, Buskerud & Vestfold University
College, Institute of Health Sciences
Presentation

- Review of the Current Status of Clinical Nursing Research
- Forces within the Healthcare System Impacting on CNR and Implications for Research Approaches
- Challenges in Clinical Nursing Research
- Prospects for Clinical Nursing Research
Definitions of Clinical Nursing Research (CNR)

- **Clinical Nursing Research with a Broad Meaning***
  - Nursing research regarding clinically encountered phenomena carried out with humans as the research subjects
  - Addresses clinically relevant and nursing oriented research questions for description, understanding, explanation, prediction, or prescription

- **Clinical Nursing Research with a Narrow Meaning**
  - Nursing research for the development of nursing interventions (Coming from the EBP orientation)

(*My use in this talk)
Configuration for Clinical Nursing Research

- Basic Research: Translation to develop interventions
- Applied Research: Translation To apply In practice
- Implementation Research: Application In Practice
- Client Outcomes
Current Status of CNR

The Beginning
- Since the 1960s following through the Independence Phase & The Formative Phase of Nursing Theory Development
- The 1980s – Doctorally prepared nurse researchers & NINR in the US

Current Status
- Continuously increasing CNR in general
- Adoption of many different research methods (Quantitative, Qualitative, & Critical)
- Multiplicity in philosophical, paradigmatic, and theoretical orientations
- A variety of subject areas of research
  - Clinical practice areas
  - Client groups
  - Clinical phenomena
Findings from Three Reviews of the Literature

**Percent of CNR Articles by Research Methods**

- **Review 1**
  - Experimental/Quasi-Ex: 448
  - Other Quantitative: 1,148
  - Qualitative: 661
  - Other: 765

- **Review 2**
  - Clinical / Practice: 765
  - Health Promotion: 661
  - Non-Clinical: 1,148

- **Review 3**
  - Experimental/Quasi-Ex: 100
  - Other Quantitative: 77
  - Qualitative: 25
  - Other: 44

**Publications In Review 1**

- Clinical / Practice: 765
- Health Promotion: 661
- Non-Clinical: 1,148

**CNR Publications In Review 2**

- Primary Health Care: 44
- Chronic Illness: 36
- Mental Health: 35
- Acute/Physical Illness: 72

**CNR Publications In Review 3**

- Primary Health Care: 44
- Chronic Illness: 36
- Acute/Physical Illness: 35
- Mental Health: 72

**Years Covered for the Reviews**

- Review 3 (2010)
Insights Gleaned from These Reviews

- Majority of CNR applying descriptive & explanatory designs
  - Less than 20% are applying experimental/quasi-experimental designs – Low level of nursing intervention development
- Research on clinical issues in acute care nursing – low
- Paucity of Systematic Reviews (Especially for broad subject areas such as women’s health, chronic illness, etc.)
  - Quality of systematic reviews (2013 publication by Polkki et al. – Standardization lacking)
Major Issue in Relation to Knowledge Development

- **State of the Science for a Given Subject Matter**
  - Often not a significant concern to researchers
  - Fragmentation

- **Lack of Integration & Cross-talk**
  - Research Synthesis often limited to a same paradigm (meta-synthesis not an accepted approach)
  - Systematic integration of knowledge – Not done
  - Researchers remaining with one paradigm orientation
  - Philosophical disputes for integration across paradigms
Current Forces Influencing CNR and Related Research Approaches
Current Forces Influencing CNR

- Person-centered Care
- Collaborative Practice
- Evidence-Based Practice
- Concerns for Client Safety
Person-Centered Care

- Built on the Values of Self-determination, Autonomy, Emancipation
- Definition (IOM) – “Care that is respectful of and responsive to individual patient preferences, needs, and values, ensures that patient values guide all clinical decisions”
- Five Quality Dimensions of PCC (IOM)
  - Customization based on patients’ needs and values
  - Patient as the source of control
  - Shared knowledge & free flow of information
  - The need for transparency
  - Anticipation of needs
Person-centered Research

- Integration of Person-centered concept in CNR
  - Research Design
  - Conceptualization and Constructs for Client Outcomes
  - Clients as Research Participants (Subjects)
  - Research Methods
Patient-Centered Outcomes Research Institute (PCORI)

- Major Orientation in the Funding of Comparative Effectiveness Research
- PCORI’s Engagement Principles
  - Reciprocal Relationships
  - Co-learning
  - Partnership
  - Trust, Transparency, Honesty
- PCORI’s Engagement Rubric
  - www.pcori.org/sites/default/files/PCORI-Engagement-Rubric-with-Table.pdf
- PCORI’s Methodology Standards
Person-Centered Research – Research Design Issues

Integration of person-centered orientation in:

- Research design in relation to research questions and intervention development/testing
  - Disparity between those questions developed by researchers or clinicians and those by patients (service users/families)
  - Strategies for getting person-centered research questions – The first stage of research for seeking research questions from the patients/users perspective
    - Exploratory research through focus group interviews, in-depth individual interviews or surveys
- Intervention development/testing
  - Seeking opinions regarding interventions from patients/users
  - Alternatives to interventions with external “control-orientation”
    - Focusing on developing and testing interventions that persons can do for themselves to solve their health related problems (Exploration of self-help methods in use)
Person-centered Research – Outcome Measures

Integration of person-centered orientation in:

Selecting Outcome Measures

Person-driven measures

Person-reporting measures (Objective measures and Subjective measures)

Outcome measures which are important to participants

Identification of participants’ expected outcomes in trials

Identification of important measures to participants

Methods in measurement development

Client-driven measurement development

Measurement evaluations
Person-centered Research – Research Participants

Integration of person-centered orientation in:

- Persons as research participants
  - Participatory research process (Competence groups; Panel of experts composed of patients/users)
    - Involvement in participant recruitment
    - Having voice in the conduct of research
    - Reflective involvement in data interpretation
Person-centered Research - Methods

- Participatory Action Research
- Case Studies
- Adaptive Trials (a study that includes a prospectively planned opportunity for modification of one or more specified aspects of the study design and hypotheses based on analysis of data [usually interim data] from subjects in the study)
  - Flexibility in the progress of research based on “prospectively” planned adaptations
  - Effectiveness seeking in relation to person-specificity and context-orientation
- Mixed-methods research
  - For contextual understandings and multi-level perspectives including cultural influences
  - Application of rigorous quantitative and qualitative methods
- Quantitative Designs
  - Cross-over designs
  - Repeated Measures designs
Collaborative Practice

- **Definition** – “Delivery of health care by multiple healthcare providers to provide comprehensive services by working together synergistically along with patients, their families, caregivers, and communities to deliver the highest quality of care across settings” (WHO, 2010)

- **Patient/Service user at the center as an active partner** (Person-centered care orientation)

- **Objectives** – Prevent fragmentation, duplication, and omissions through coordinated service relationships in terms of planning, provision, and evaluation of health care
Collaborative Practice Research

- **Interdisciplinary (Cross-disciplinary; Multidisciplinary) Research**
  - **Objectives**
    - To gain comprehensive understanding from multiple disciplinary perspectives
    - To solve complex questions and problems of health care
    - To develop healthcare approaches with interdisciplinary/collaborative orientation
  - **Two Forms**
    - **Integrative Interdisciplinary Research (Cross-disciplinary Research Team Approach)**
      - Interdisciplinary research team working together for a study during the whole course of the research process, especially to solve “complex problems”
      - Paradigm shift from single-discipline orientation to multiple/collaborative discipline orientation for conceptualization of healthcare issues and approaches to healthcare problems
    - **Additive Interdisciplinary Research**
      - Disciplinary researchers addressing a research issue from various disciplinary perspectives together with an interdisciplinary aim for comprehensive understanding
Collaborative Practice Research

“Transdisciplinary Research”

- One form of contribution to developing and enhancing collaborative practice
- Existence of multiple paradigm orientation in healthcare research – Often discipline specific (medicine & epidemiology – positivism; nursing and other disciplines open to constructivism, postmodernism, and pragmatism)
- For multiple sense-making and multi-ontologies into a system of knowledge
- For comprehensive knowledge-base for clinical practice
- Transdisciplinary Research Teams
Collaborative Practice Research

- **Research on Collaborative Practice Processes**
  - Collaborative practice as the subject of research
    - Processes
    - Forces
    - Transformation

- **Research Perspectives**
  - Examination and explanation of current practice (Explanatory research)
  - Intervention research to increase collaboration in practice
  - Critical & transformative research (To change the current practice)
    - Action research (Participatory action research; Critical action research)
Evidence-Based Practice (EBP)

- Definition of EBP: “Applying the best available research results (evidence) when making decisions about healthcare. Health care professionals who perform EBP use research evidence along with clinical expertise and patient preferences”

- A narrow interpretation – Focusing on clinical decisions regarding interventions based on research evidence (Best evidence from RCTs)

- A broader conceptualization – “Knowledge-based practice”
EBP Research – Moving beyond RCTs

**Concerns**
- Low Adoption of Interventions from RCTs in Practice
- Competing evidences of effectiveness by different interventions for a given health problem
- Problems associated with single-dimension oriented interventions in solving multidimensional problems

**Methods for Moving Beyond**
- Research on Complex Interventions
- Implementation Research
- Comparative Effectiveness Research
Complex Interventions

“Interventions with several interacting components”

Dimensions of complexity

- Number of components within an intervention and interactions among them (Examples – self-care intervention for newly diagnosed diabetes; Physiological-behavioral-psychological intervention for urinary incontinence)

- Number & difficulty of behaviors required by those delivering or receiving interventions (Examples – Educational, support intervention for chronic illness management)

- Number of groups or organizational levels targeted by interventions (Examples – Public health interventions; Nosocomial Infection Prevention Intervention)

- Number and variability of outcomes (Examples – Patient-controlled cognitive-behavioral intervention for pain, fatigue and sleep disturbances during cancer treatment; Intervention for post-stroke psychosocial challenges)

- Degree of flexibility or tailoring of interventions permitted (Examples – Culture brokering)
EBP Research – Complex Interventions Research

Development & Evaluation of Complex Interventions (MRC Guidelines, 2008)

Development
1. Identifying the evidence base
2. Identifying/developing theory
3. Modelling process and outcomes

Implementation
1. Dissemination
2. Surveillance and monitoring
3. Long-term follow-up

Feasibility/piloting
1. Testing procedures
2. Estimating recruitment / retention
3. Determining sample size

Evaluation
1. Assessing effectiveness
2. Understanding change process
3. Assessing cost-effectiveness
From: Corry, Clarke, While, & Lalor (2013) – Model for Developing Complex Interventions in Nursing

Synthesis of existing empirical evidence

Scope of nursing practice

Needs analysis

Problem identification

Practice analysis

Policy/strategy analysis

Identify theory or key principles to guide the intervention and study protocol. Theory/principles used to guide the interventions should be amenable to nursing

Identify overall objective/goal of the intervention

Build the intervention

Model the intervention and seek expert review

Plan delivery of the intervention

Develop the protocol

Exploratory phase

Needs analysis

Problem identification

Practice analysis

Policy/strategy analysis

Identify overall objective/goal of the intervention

Build the intervention

Model the intervention and seek expert review

Plan delivery of the intervention

Develop the protocol

Exploratory phase
EBP Research – Implementation Research

- Needs for Implementation Research
  - Research-Practice Gap
    - Practitioner Factors
    - Organizational Factors
  - Applicability of Interventions
    - Individual differences (Clients) – Ways of individualization with a given intervention
    - Contextual forces – Finding ways to accommodate to contextual factors

- Methods of Implementation Research
  - Evaluation research
  - Qualitative case studies
EBP Research – Comparative Effectiveness Research

- **Major Orientation for CER**
  - Seeking the best fit between a specific intervention and client-singularity
  - Availability of more than one effective intervention regarding a health issue
    - Compare interventions for the best fit for which clients and under what circumstances
  - Context-specifying intervention research
    - “How well treatments work, under what circumstances, for whom, and compared to what”

- **Methods of Comparative Effectiveness Research**
  - Meta-synthesis
  - Observational studies utilizing electronic healthcare records
  - Pragmatic clinical trials (quasi-experimental studies)
  - Field evaluation research
Patient Safety in Health Care

- Patient safety in health care in relation to quality of care
  - Occurrences of harmful events (falls, infection, injury, medication error, untoward effects of treatments, etc.)
  - Safety as a way of enhancing recovery and wellbeing
Patient Safety Research

- Descriptive & Explanatory Research
  - Epidemiological studies
  - Observational studies using electronic healthcare data
  - Specific explanatory designs (Example: Study of patient falls)

- Prevention-oriented research
  - Testing of interventions to prevent harm in clients and clients’ recovery
Challenges in Clinical Nursing Research
Two Dimensions for Examining the Challenges and Prospects

➤ “What to Address in CNR” (Content)
  ➤ Basic Research – Basic understandings about the nature, processes, and mechanisms regarding health-related phenomena and nursing practice phenomena
  ➤ Applied Research – Development and testing of strategies of nursing care to improve people’s health and health outcomes
  ➤ Context-specifying Research (Implementation Research) – Development and testing of adaptive/application algorithms regarding developed strategies for “clinical tailoring”

➤ “How to Address Clinical Questions in Research” (Method)
  ➤ Methods for different contents and different research aims
Agendas for Basic Research in CNR

- Great Strides Achieved in Recent Decades
  - Biophysiological, biobehavioral nursing research
  - Biopsychosocial models of explanation
  - Multiple research methods
    - Quantitative
    - Qualitative – phenomenology, grounded theory, ethnography & field research
    - Critical

- What Needs Further Attention
  - A lack of systematization of knowledge produced
  - Uneven attention to critical nursing phenomena
  - A need to move from single phenomenon orientation to multiple co-existing phenomena orientation and from the state/time orientation to trajectory/transition orientations.
Basic Research in CNR – Challenge 1

Remedying the lack of systematization of knowledge produced

- Integrated systematic reviews at the basic nursing research level
  - State of the science reports on critical and essential nursing phenomena
  - Drawing from various data bases and from various perspectives (physiological, biobehavioral, psychosociocultural, interpretive, and critical)

Methods

- Meta-synthesis
- Systematic Reviews, Inventories, and Mapping of Evidence
Basic Research in CNR – Challenge 2

- Researching critical nursing phenomena
  - Determining critical nursing phenomena
    - Be aware of one’s “cocooning” within narrow fields of research & avoid “butterfly” behavior of chasing after popular topics
  - Methods
    - Person-centered research
      - Drawing research questions which are critical to clients/service users
Basic Research in CNR – Challenge 3

- Developing knowledge about multiple co-existing or complex phenomena
  - Complexity in Client phenomena
    - Multiple co-existing states (Symptom clusters or complexes)
      - Examples: Complexes of fatigue, depression, & sleep disturbances; of pain, anxiety, sleep disturbances, & mobility difficulties
    - Multiple co-existing experiences (MCE and Experience clusters)
      - Examples: Experience clusters associated with having surgery, being on cancer therapy, being frail, in long-term care, of parenting, on co-management of co-existing chronic conditions
  - Symptom trajectories or transitions
    - Examples: chronic illness trajectory; pain trajectory, fatigue trajectory; fraility trajectory
- Methods
  - Progressive research programming
    - Moving from single phenomenon studies to multiple/multidimensional phenomena clusters
  - Person-centered research
  - Trajectory research – Longitudinal quantitative designs including outcomes research and life-story designs
    - Example: Study of patients with end-stage kidney disease to identify trajectories of symptoms, physical functioning, psychosocial needs, and emotional and spiritual well-being (NINR funded)
Applied Research in CNR

- Development and Testing of Strategies in Nursing
  - Nursing Strategies with Orientations in the Three Modes of Attending in Nursing Practice
    - Strategies with the mode of attending to clients as persons (Care orientation)
    - Strategies with the mode of attending to clients’ problems (therapy orientation)
    - Strategies with the mode of attending to professional work (Practice process orientation)
  - Issues
    - Prevailing focus on developing interventions (treatments)
      - Less focus on developing care-oriented strategies
    - Single-dimension oriented interventions
    - Interventions with “external control” orientation rather than client-self oriented strategies
    - Lack of practice model development
Applied Research in CNR – Challenge 4

- Research on Care Oriented Nursing Strategies
  - Seeking to develop care oriented nursing strategies which can be used in conjunction with therapeutics
  - Care-oriented nursing strategies tend to be multidimensional – Complex Interventions

- Methods
  - Complex Intervention Research
    - Examples: Development and testing of interventions such as caring, empowerment, support, client advocacy, and nursing aesthetics
  - Comparative Effectiveness Research
Applied Research in CNR – Challenge 5

Research on Complex Nursing Interventions

- Complex Nursing Interventions
  - Interventions for complex client experiences such as symptom clusters, MCEs, and experience trajectories – Complexity in outcomes
  - Complex interventions which have multiple components

Methods

Complex Intervention Research

- Examples: A clinical trial of cognitive, behavioral intervention for symptom clusters of pain, fatigue, and sleep disturbances in patients in cancer treatment (NINR funded); A psychosocial consequences of stroke (Kirkevold et al.); Development and testing of a nursing intervention for recovery trajectory following open-heart surgery plotted to recovery trajectory

Complex Intervention Research with Longitudinal Orientation

- For Trajectories
Applied Research in CNR – Challenge 6

- Research on Client Self-help Interventions

  - Self-help Interventions
    - Based on folk knowledge
    - What patients do for themselves to solve problems

  - Methods
    - Exploratory Research followed by Complex Intervention Research
      - Exploratory research (Person-centered research orientation) – Investigation of strategies successfully used by people
      - Developing and testing such interventions in Complex Intervention Research Designs
      - Examples: Caregiver stress management; Living with chronic illness; Managing chronic pain; Weight management; Depression trajectory
Applied Research in CNR – Challenge 7

- Research on Nursing Practice Models
  - Types of Practice Models
    - Person-centered Practice Models
    - Collaborative Practice Models
    - Everyday-life Practice Models (Especially for chronic mental health care)
    - Palliative Practice Models
  - Methods
    - Action research
    - Evaluation research
    - Quasi-experimental studies
Implementation Research in CNR

“Tailoring” research as a value in CNR
Implementation Research in CNR – Challenge 8

- Tailoring Research for Developed Interventions
  - Implementation flexibility
    - Tailoring for clients’ needs, characteristics, and preferences
    - Maximizing the effects of interventions through the identification of contextual factors that favor intervention implementation
  - Methods
    - Evaluation research
    - Tailoring research (Adaptive Trials; Comparative Effectiveness Research)
    - Case studies
Implementation Research in CNR – Challenge 9

- Develop Tailoring Research Methods Specific for Clinical Nursing Research
  - Nursing practice as the source for knowing the ways of “tailoring”
  - Finding ways of systematizing such knowing
    - Development of Research Methods
      - To systematize nurses’ personal scripts or qualitative evaluations
Prospects for Meeting the Challenges
Ways of Addressing the Challenges

- Research Programming at the Disciplinary Level
- Research Programming at the Institutional Level
- Research Programming at the Individual Level
Research Programming at the Disciplinary Level

- National Research Agendas (Continuously shifting)
  - NINR Division Programming
    - Symptom Science
    - Wellness & Underserved
    - Self-management & Community-based Interventions
    - End-of-life and Palliative Care
  - The European Organization in nursing research: Reflection Network
    - Focus on “complex interventions”
Research Programming at the Institutional Level

- Through centers or institutes of clinical nursing research at institutions (healthcare units, universities, etc.)
  - Priority setting for institution-based research to enrich the knowledge base, and become known as expert centers
  - Programming oriented to progressive development of knowledge (Mapping of progress)
Research Programming at the Individual Level

- Research programming with a commitment to a theoretical orientation
  - Aim – Developing the theory
  - Examples: Roy adaptation model; Coping theory; Biobehavioral Model
Research Programming at the Individual Level

- Research programming with a commitment to a specific client type
  - Aim – Advancing practice with specific client groups
  - Examples: Women’s health; Elderly; Family; Chronically mentally ill clients
Research Programming at the Individual Level

- Research programming with a commitment to specific clinical phenomena (clinical problems)
  - Aim – Advancing knowledge of the phenomena and advance practice in relation to the phenomena
  - Examples: Pain; Fatigue; Collaboration
“Do not forget the big picture of nursing knowledge for practice; and always try to put your research onto this big picture!”
Questions