Conceptual Frameworks: A Brief Introduction on Why and How to Use Them in Research

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Works in Progress – December 10th, 2018
Learning Objectives

• Describe how conceptual frameworks enhance study rigor
• Discuss common conceptual framework models used in health services research
• Apply conceptual framework exercise on an example study
Conceptual Frameworks
What is a Conceptual Framework

• **Specific approach** to thinking about a research problem, usually represented as a diagram to show important concepts and processes

• Frameworks are derived from **related concepts** (conceptual, practical) or **existing theories** (theoretical) – benefit is using a shared language

• All frameworks are based on key concepts and emphasize different variables in order to show **relationships** between them
What is a Conceptual Framework

Frames:
• Problem statement
• Research design
• Recruitment & selection
• Data collection
  What to collect data on (variables)
• Interpretation of results
• Presentation of results

GUIDES YOUR STUDY FROM START TO FINISH
What is a Conceptual Framework

Represent ways to thinking about a problem or how things work

• **Illuminate (Lighthouse)** and **Magnify (Magnifying glass)**

  • Magnify specific elements of a problem by focusing on specific or part of conceptual framework

  • Illuminate specific problem, leaving other aspects for another inquiry or approach

  • Specifically identify principles, pathways, variables (or interactions of these)

(Bordage, 2009)
Conceptual Frameworks as Models

• Diagrams the research interest
  • Highlights causal linkages between concepts
  • Build backwards from outcomes, through correlates, mediators, ancestors, etc
  • Each concept and arrow can be studied, or the entire model

- Concepts represented as shapes
- Processes shown as arrows
- Can be multi-level
Conceptual Frameworks as Models

- Diagrams the research interest
  - Highlights causal linkages between concepts
  - Build backwards from outcomes, through correlates, mediators

Bandura’s theory of self-efficacy, belief of one’s effectiveness performing a task
*Important to motivation to learning or change in behavior*
Common Conceptual Frameworks
Common Conceptual Frameworks

**Andersen Behavior Framework** (Andersen, 1995)

- Predict and explain use of care services by individuals

### Predisposing Characteristics

- **Motivate**
  - ▲▼ predisposing
  - Attitude/knowledge
  - Climate/culture
  - Hard to alter

### Enabling Resources

- **Support or Impede**
  - Availability/access to resources
  - Ability to respond △ by decisionmakers

### Need for Coordination

- **Stimulus**
  - Perception on need for coordinated care by individuals or healthcare team

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**Coordination of Health Services**

**Behavior**

Behavior △ needed to ▲ care
Common Conceptual Frameworks

**Relational Coordination Framework** (Gittell, 2002)

- Identify interventions to increase: communication, shared goals, respect

![Diagram showing the Relational Coordination Framework]

- Org Design
- Participants & Teamwork
  - Communication
  - Shared Goals & Knowledge
  - Mutual Respect & Helpfulness
- Quality
- Efficiency
Common Conceptual Frameworks

**Social Ecological Model** (McLeroy, 1988; originated with Bronfenbrenner)

- Study spheres of influence on behaviors at each level
Common Conceptual Frameworks


Conceptual Frameworks Illuminate and magnify BUT...

• It can (and should) leave other topics/processes in the dark, not purpose of study

• May need multiple frameworks
  • Content: the “what” or the “mechanism” of concepts
  • Process: research, intervention implementation, analysis, the “how” to do research inquiry

• Conceptual frameworks must be chosen with care!
What if No Conceptual Framework Fits?
Steps to Conceptualize Your Work

1. Conduct a literature review
   • What have others done, your field and others → consider modifying or adapting
   • How/what can you adapt for your specific research problem

2. Create a flow chart
   • Identify what variables could be of interest
   • Only include variables that can be operationally defined, measured
   • Incorporate flow, with arrows implying causality (top → bottom, left → right)

3. Write a narrative
   • Identify flaws or missing elements

4. Revise
   • Adapt to literature and findings
Adaptation Example: Food Insecurity & Impact of Mobile Meal Program in Silicon Valley

Policies and environment allowed for placement of sites in public areas that met federal criteria for reimbursement.

School district prioritized food insecurity and developed novel community-based meal program.

Key community organizations collaborated to support the program with resources.

Interpersonal Connections and social interactions were fostered by the program’s public nature.

Individuals in the community valued that program was open and welcoming.

Diverse interpersonal connections that fostered P/E collective action.

Resourced, connected organizations that monitor and promote P/E.

Communities that recognize importance of health problems & disparities and champion P/E options.

Policies and environment that facilitate health and autonomous decisions for all (P/E).

Fair and equitable distributions of resources and power across individuals.

Golden, 2015 “inside out” social ecological model.

Bruce et al (under review) adaptation.
Research Question:

Is the presence of a VA facility spinal cord injury center associated with BMI assessment for spinal cord injured patients?

*Courtesy of Dr. Eisenberg*
Example Conceptual Framework - A

Is the presence of a VA facility spinal cord injury center associated with BMI assessment for spinal cord injured patients?

What are intake staff knowledge on BMI assessment? Does this differ by SCI status? What resources for BMI assessment are used by SCI/nonSCI centers?

Using Andersen Framework:

Predisposing Characteristics
- Motivate
  - MD/staff attitudes
  - Culture of facility

Enabling Resources
- Support or Impede
  - Resources
  - Equipment

Need for Coordination
- Stimulus
  - Perceived need by the MD/staff on the importance

Coordination of Health Services
- Behavior
  - ↑↓ care, documentation

* Identify causes of different processes
Example Conceptual Framework - B

Is the presence of a VA facility spinal cord injury center associated with BMI assessment for spinal cord injured patients?

What are the main drivers of BMI assessment and documentation?

Modified Framework:

1. VA system, overall facilities
2. Personnel
3. Specific VA resources, equipment
4. Culture, climate

SCI BMI Markers
Time to Practice

Review worksheet

- Do Conceptual Frameworks come to mind when considering your research study?
- What variables were you able to add/remove based on a model?
- How did you do?
- Questions?
GUIDING YOUR STUDY FROM START TO FINISH: The building blocks of validity for your research

Andersen Framework

Your Research

Modified Framework
In Summary: Why are Conceptual Frameworks Important?

- Specify Problem
- Visualize Relationships
- Interpret Results
- Present Findings
- Test/Develop Theory
- Grant Applications