Using Theoretical Frameworks in Mixed Methods Research

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Learning Objectives

1. Describe a theoretical framework and explain the value of applying theory to a mixed methods research design.
2. Enlist resources from the literature in order to apply a theoretical framework in your own work.
3. Apply a theoretical framework to a MMR study a priori.
4. Apply a theoretical framework to an MMR study ex post facto.
Use of Frameworks in Extant Literature

Review of MM studies (2004-2010) in multiple databases produced only 28 articles using a theoretical framework *a priori*.

Of the 28, 11 were from nursing and 10 from other disciplines.

Only 7 articles used the framework throughout the research process. (Evans, Coon, & Ume, 2011)
Why use theory?

- Used first in dissertation
- Found value in multiple areas of the research process
- Particularly useful in sequential studies
Archipelago metaphor

• Land visible above surface of water only small portion of larger structure
• Some islands connected; some outliers

(Bazeley, 2018; Lawrenz & Huffman, 2002)
Value of Theoretical Frameworks

• Theory implied by literature review, method selection, problem presentation (Sandelowski, 1993); conceptual/organizational “hooks” (Sandelowski, 1999)

• Grant Writing (Evans, Coon, & Ume, 2011)
  – “vehicle for discussing significance and innovation in methods, identification of gaps in research, and foreshadowing of project outcomes and future research plans” (p.5)
Potential Drawbacks of not using

• No template for future researchers
• Replication
• Possible poor data integration
Theoretical Frameworks

• In MM designs used to predict and shape the direction of a study
• Guides topic of study, research questions, variable selection
  • Creswell & Plano Clark, 2018
Map

- Use a framework to guide research design
- To guide decision-making
Net

• Use framework to determine if questions align with purpose of study
• Efficiently answer research questions
Advisor

- To direct choice of variables in quantitative phase or strand
- To direct research process at subjective decision-making points
- To direct case selection in a qualitative phase
Common Theories

• **Social Cognitive Theory** – Bandura (psychology)
• **Social Development Theory** - Vygotsky (psychology and education)
• **Erickson’s Theory of Psychosocial Development** (psychology)
• **Ecological Systems Theory** – Bronfenbrenner (multiple disciplines)
Using Resources

• Search before using theory as framework in own work
• Phrases “conceptual framework,” “guiding framework,” “theoretical framework”
• OR search using theory: “social cognitive theory” AND (“mixed methods” OR (quantitative AND qualitative))
Using Theoretical Frameworks A Priori

Theory: Positive Psychology
Grit Within the Context of Career Success: A Mixed Methods Study (Clark, 2016)
Theoretical Frameworks

POSITIVE PSYCHOLOGY

SOCIAL COGNITIVE CAREER THEORY

SELF-DETERMINATION THEORY

Career Success

Grit

Clark (2016)
Grit and Career Success

• Theoretical framework used a priori
• **Positive Psychology:**
  – Well being, flourishing, the “good life”
  – Common terms: well-being, optimal, engagement
  – Includes character strengths (wisdom, zest, optimism)
Theory Informed:

- Research Topic
- Research Design
- Research Questions
- Variables
- Sampling
- Recruitment
- Data Analysis/Interpretation
- Future Research
Does the topic align with the major concepts associated with the framework?
Does the topic align with the major concepts associated with the framework?

Framework & Research Topic

+Ψ

grit

career success
Framework and Research Design

- Convergent
- Sequential
- Embedded

- MM Case Study
- Transformative Emancipatory
Framework and Research Design

Identify flourishers to learn about grit and success

Select Participants

Interview flourishers to learn about grit and success

Quantitative Phase

Point of Interface

Qualitative Phase
Focus on “flourishers” – top scores in grit and career success

Clark (2016)
Theory Guided Interview Protocol Development

• Qualitative Phase: Individual Interviews
• Positive Psychology guided interview questions
• Focused on success
  – What success have you experienced in your career?
  – What has helped you to achieve this success in your career?
    • Probe for relative importance of objective/subjective measures.
  – Some people call drive and persistence “grit.” How does this term “grit” apply to your career success?
Theory Guided Start-Up Codes in Data Analysis

• 1\textsuperscript{st} Round: Emergent coding
  – Findings not useful
• 2\textsuperscript{nd} Round: All 3 theories
  – Social Cognitive Career Theory, Self-Determination, Positive Psychology
  – Findings not useful
• 3\textsuperscript{rd} Round: Grit & Career Success
  – Findings cohesive
  – Provided insight
Clark (2016)
Make Connection Explicit
Clark (2016)
Theory should be Explicitly Linked in Write-Up

- “The theory of positive psychology also guided this approach because I selected individuals who were flourishing in their career and who also had a high score on the Grit-S (Duckworth & Quinn, 2009).”
- “By using positive psychology as the major theoretical framework in this research, the study contributes to the sparse literature on the importance of using a framework in mixed methods research by using theory to select the research topic, in case selection, to design and inform the qualitative phase, to design the interview protocol, and by providing a set of start-up codes in qualitative analysis.”
Using Theoretical Frameworks Ex Post Facto

Bronfenbrenner’s Ecological Systems Theory

“I had hope. I loved this city once.: A qualitative study of hope within the context of poverty”
Theoretical Frameworks Ex Post Facto

- Following data analysis
- Useful to generate start codes OR frame qualitative findings
Sequential Design

- Qualitative findings diverged from quantitative results
- Emergent approach in qualitative analysis
- Two iterations did not produce meaningful analysis
- Ecological Systems Theory applied ex post facto (Bronfenbrenner, 1979)
  - Theory aligned with qualitative findings
  - Produced more meaningful integration of results and findings
Emergent Coding

- Did not provide insight
- No cohesive patterns
Ecological Systems Theory

Macrosystem
- Attitudes and ideologies of the culture

Exosystem
- Friends of family
- Neighbors
- Mass media
- Social welfare services
- Legal services

Mesosystem
- Family
- Senior Center
- Health services
- Church Group
- Peers

Microsystem
- The Individual
  - Sex
  - Age
  - Health
  - Etc.
Ecological Systems Theory

EST used ex post facto in a sequential mixed methods study.

Illustrated are the systems represented by the qualitative data:

- **Individual**
  - “things will be better in the future”
  - “a bump in the road”

- **Neighborhood (Exosystem)**
  - Renters don’t care about anything
  - Parents don’t care about kids

- **Socio-Political (Macrosystem)**
  - Police don’t show up when called
  - Zoning favors renters
Creating a Theory

• Experience leads to theory creation
  – Literature
  – Research

• Theory used in whole or part
Figure 1. Health disparities and their effects on outcomes for the Seriously Mentally Ill.

Hauenstein, Clark, & Merwin, 2019
Cautions

• Allow theory to frame work without prohibiting discovery
• If theory fails to fit study, does not allow comparisons or an organizing framework, it may be a poor fit
My perspective

• Theory is indispensable in mixed methods research
• MM is complex – theory helps guide and frame
• Should be explicitly linked throughout research process
References


• Clark, R. S., Stubbeman, B. L., & Hauenstein, E. L. (2019). “I had hope. I loved this city once.”: A qualitative study of hope within the context of poverty”. Unpublished data.
References


References


References


• Archipelago image: juanmgeo.wordpress.com
Thank you!

• Thank you to MMIRA and IIQM
• Contact with any questions:
  – rsclark@udel.edu