Using Theoretical Frameworks in Mixed Methods Research

Rachael S. Clark, PhD

rsclark@udel.edu

UNIVERSITY OF DELAWARE®

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 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)
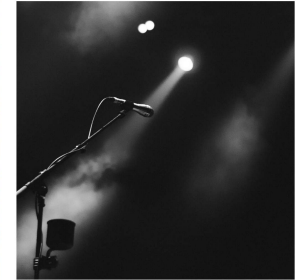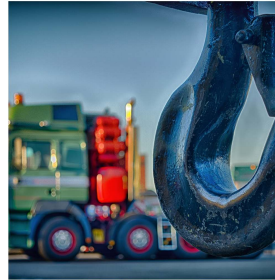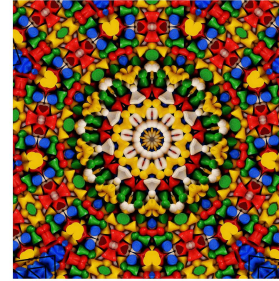
Potential Drawbacks of not using

- 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

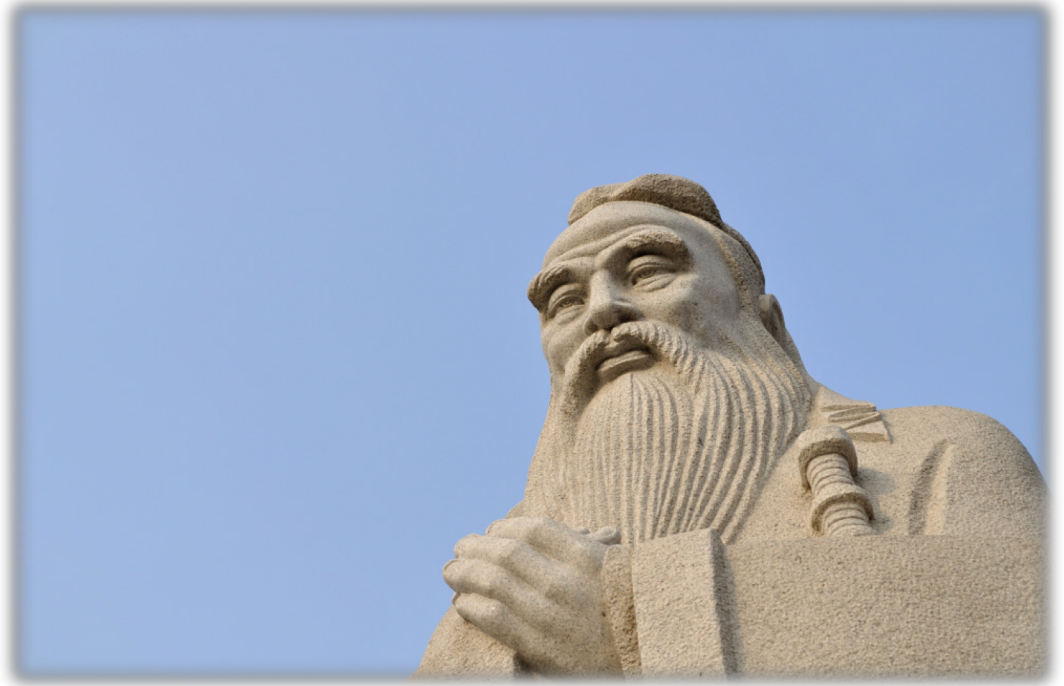- To guide decision-making

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

Career Success
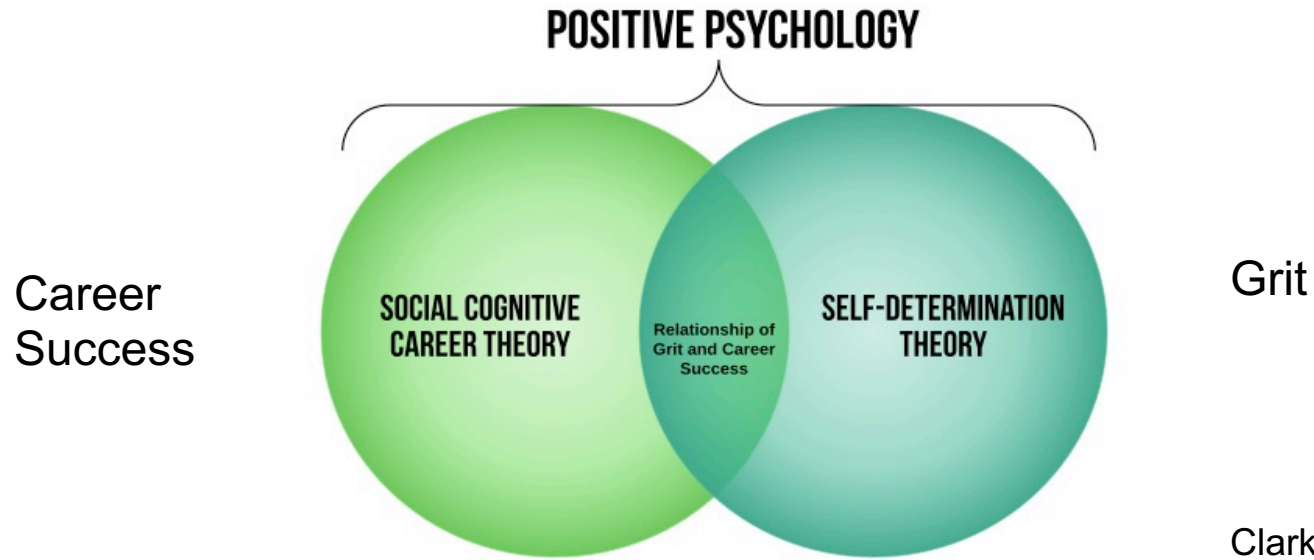
Grit

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

Framework & Research Topic
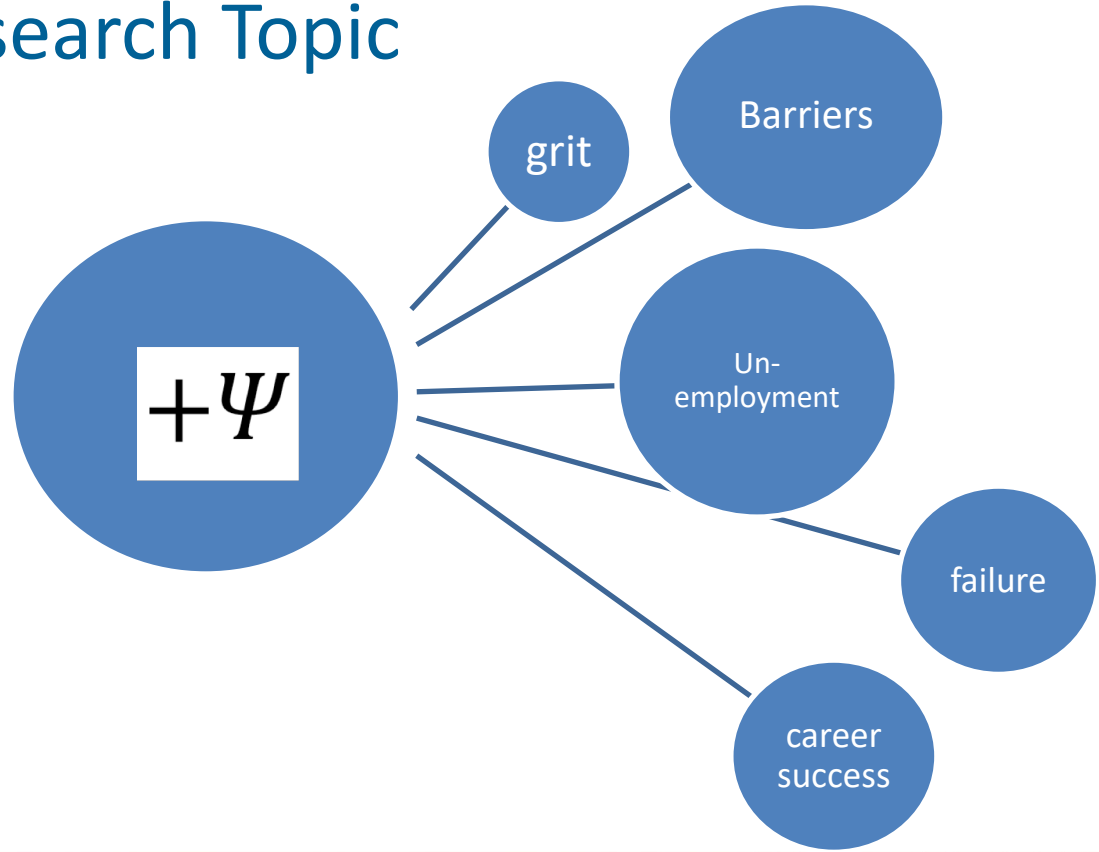
Does the topic align with the major concepts associated with the framework?

Framework & Research Topic

Does the topic align with the major concepts associated with the framework?

$+\Psi$

grit
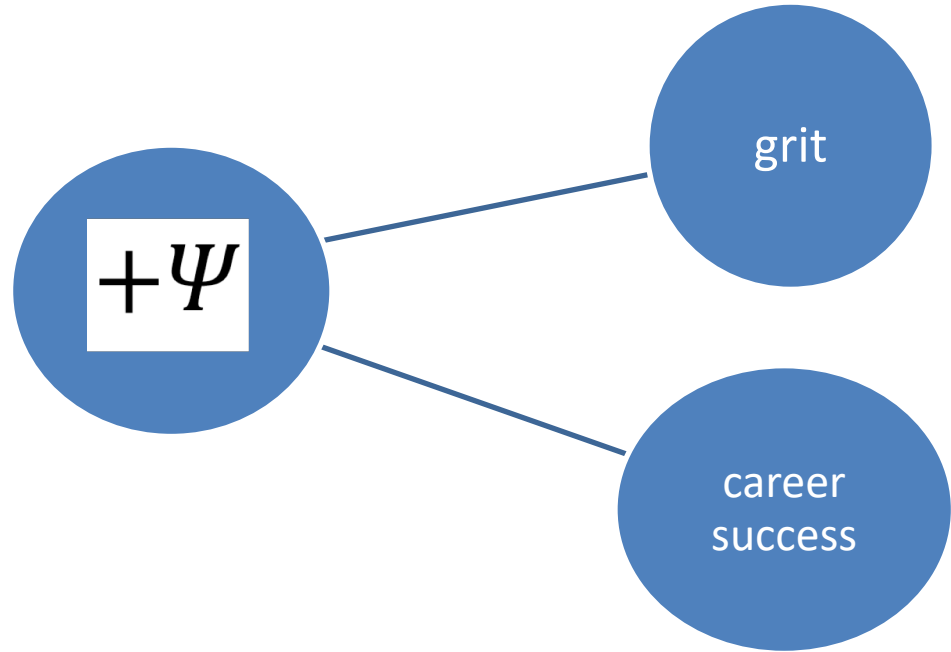
career success

Framework and Research Design

Convergent

Sequential

Embedded

MM Case Study

Transformative Emancipatory

Framework and Research Design

Identify flourishers

Select Participants

Interview flourishers to learn about grit and success

Quantitative Phase

Point of Interface
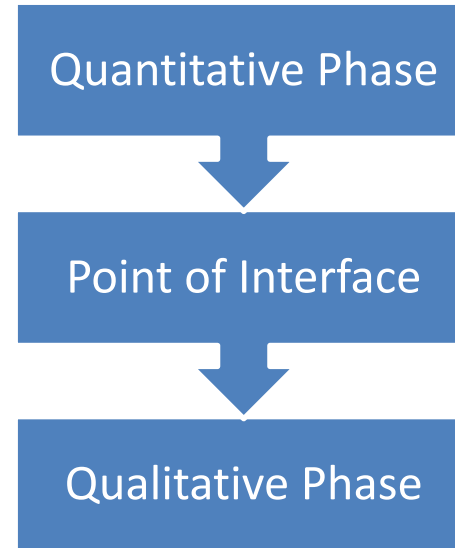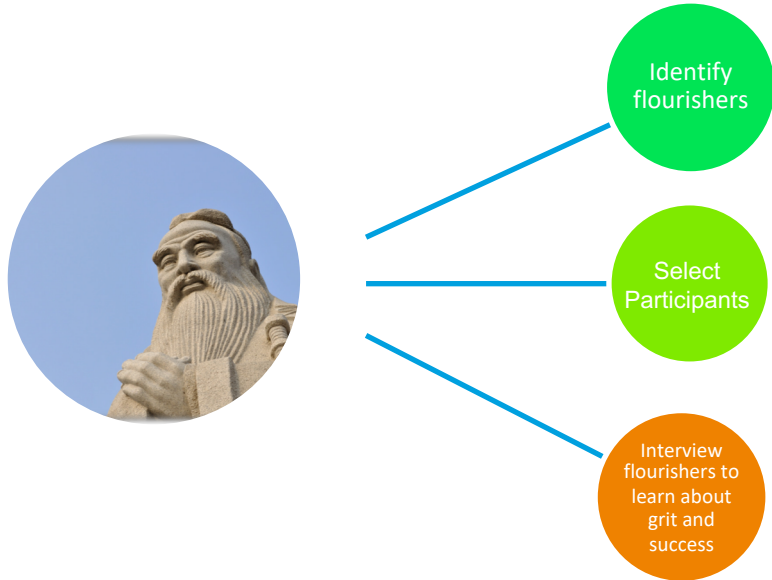
Qualitative Phase

Framework and Sampling
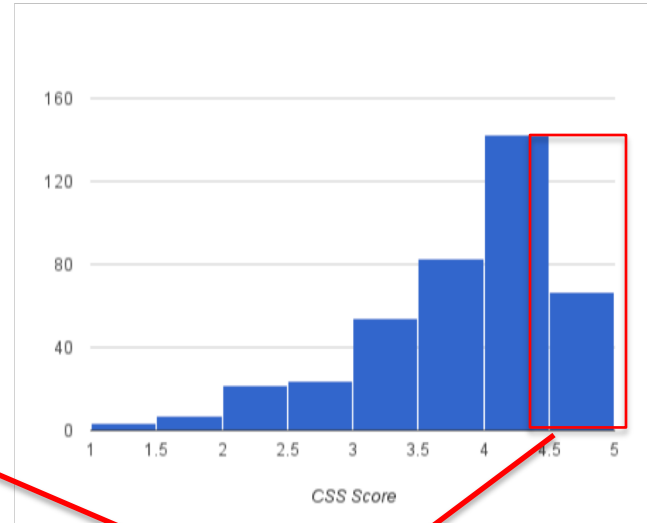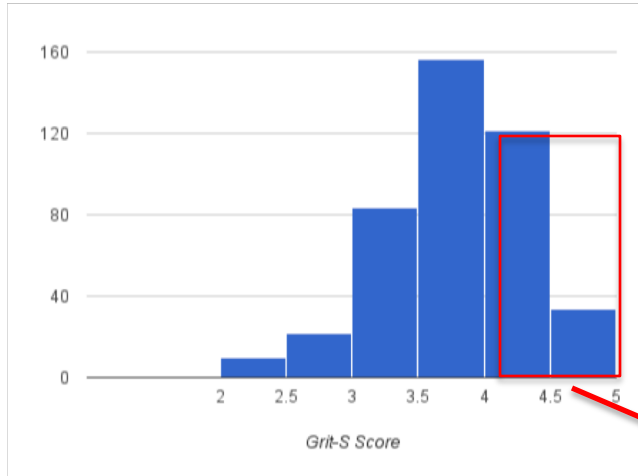
Focus on "flourishers" – top scores in grit and career success

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

- 1st Round: Emergent coding
  - Findings not useful
- 2nd Round: All 3 theories
  - Social Cognitive Career Theory, Self-Determination, Positive Psychology
  - Findings not useful

- 3rd Round: Grit & Career Success
  - Findings cohesive
  - Provided insight

Clark (2016)

Make Connection Explicit

Phase	Stage	Procedure	Product

Phase One

QUANTITATIVE Data Collection

- Sample: Working Adults n = 423
- Cross-sectional web-based survey
- Short Grit Scale
- Career Satisfaction Scale
- Salary
- Career Ranking

Numeric Data

QUANTITATIVE Data Analysis

- Data Screening and Cleaning, SPSS v. 22, Multiple Regression Analysis

Descriptive statistics, beta values

Connect

Case Selection

- Purposeful selection of 5 participants based on high grit and high career success scores
- Refine interview questions

Interview Protocol and Sample Identification

Phase Two

qualitative data collection

- Individual phone or in-person interviews with 5 participants

Text data

qualitative data analysis

- Coding and thematic analysis, MAXQDA qualitative software

Case description, codes, themes, visual representation of data

Integrate and Inferences

Integration of the QUAN and qual results

- Integration of QUANTITATIVE and qualitative results

Joint display, discussion, implications

Entire Study Framed by Positive Psychology

Clark (2016)

Major Variables

Theories

Research Questions

Grit

Career Success

Positive Psychology

Self-Determination Theory

Social Cognitive Career Theory

QUAN Questions
What is the relationship between grit and career success for working adults?

qual Questions
How do successful, gritty workers experience grit in the context of their career?

In what domains, social contexts, and environmental contexts do successful, gritty workers experience grit?

MM Questions
How do the qualitative findings about grit explain the quantitative results about the role of grit for predicting career success?

What insights do the results suggest that contribute to our understanding of how to help workers flourish in their career?

Clark (2016)

UNIVERSITY OF DELAWARE

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

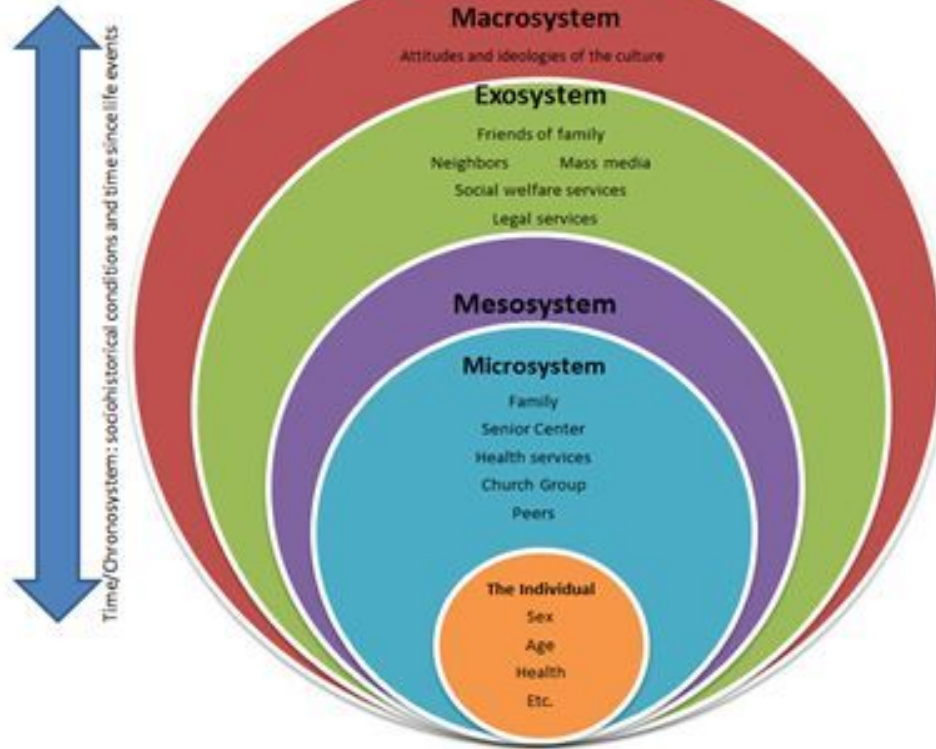 – Produced more meaningful integration of results and findings

Emergent Coding
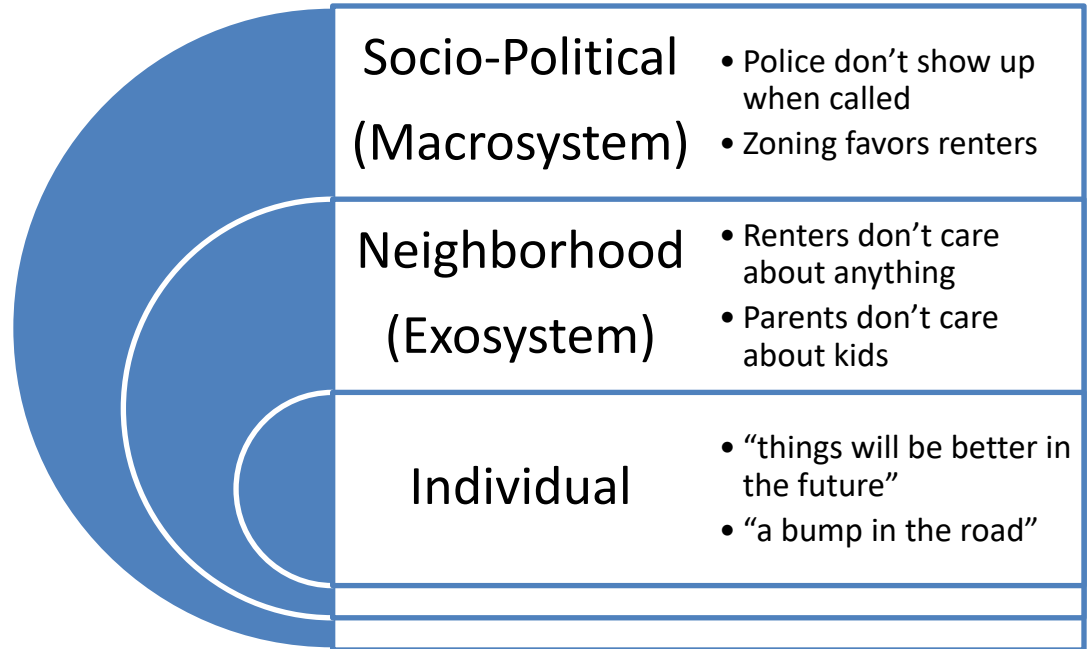
- Did not provide insight
- No cohesive patterns

Location within City

How to Create Hope

Solutions to Renter Problems
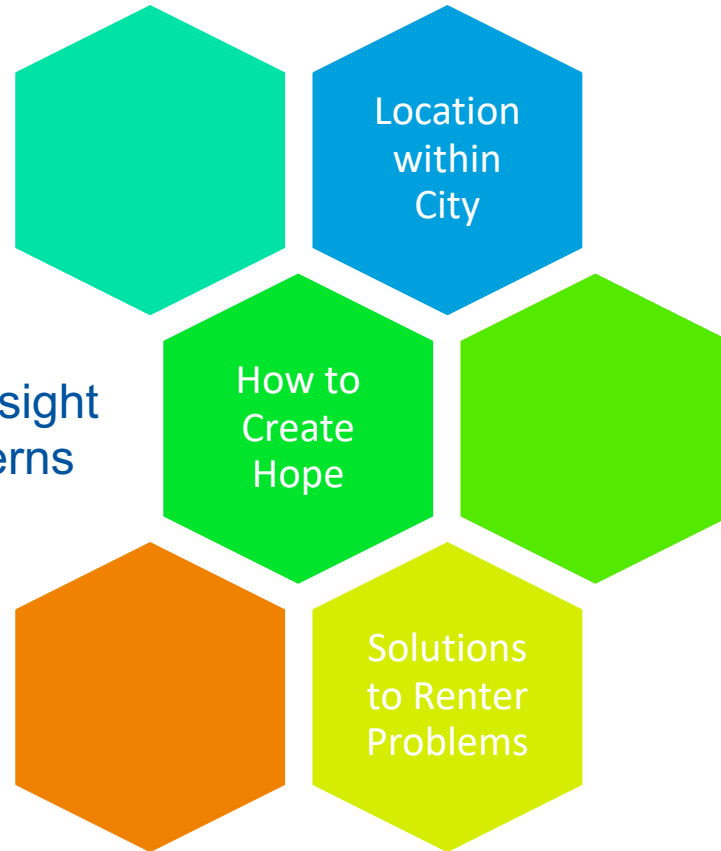
Ecological Systems Theory

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

Illustrated are the systems represented by the qualitative data

Socio-Political (Macrosystem)	• Police don't show up when called • Zoning favors renters
Neighborhood (Exosystem)	• Renters don't care about anything • Parents don't care about kids
Individual	• "things will be better in the future" • "a bump in the road"

Creating a Theory

- Experience leads to theory creation
    - Literature
    - Research
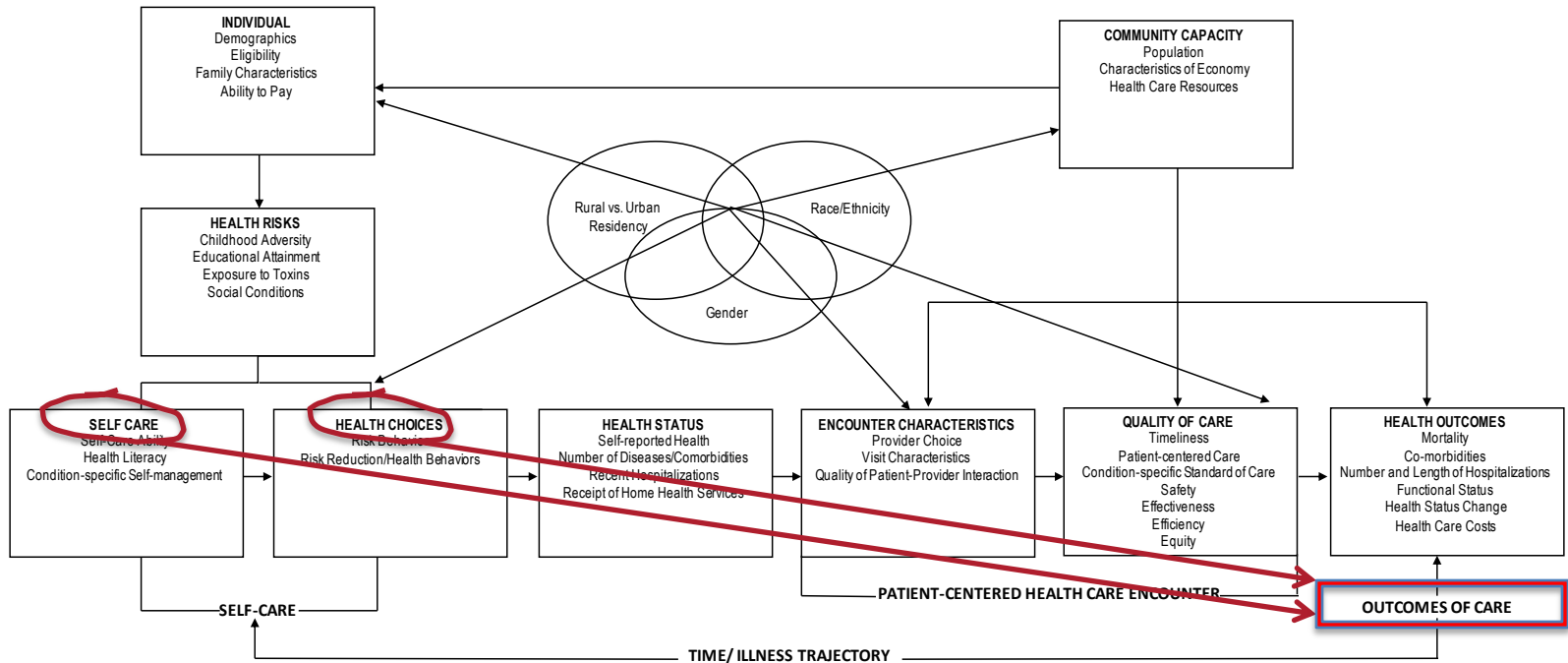
- Theory used in whole or part

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

- Bazeley, P. (2018). *Integrating analyses in mixed methods research*. Los Angeles, CA: Sage.

- Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist, 32*(7), 513-531.

- Clark, R. S. (2016). *Grit within the context of career success: A mixed methods study* (Order No. 10144935). Available from Dissertations & Theses @ University of Cincinnati. (1828354205). Retrieved from https://search-proquest-com.proxy.libraries.uc.edu/docview/1828354205?accountid=2909

- 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

- Creswell, J. W., Plano Clark, V. L. (2018). *Designing and conducting mixed methods research* (3rd ed.). Los Angeles, CA: Sage.

- Evans, B. C., Coon, D. W., & Ume, E. (2011). Use of theoretical frameworks as a pragmatic guide for mixed methods studies: A methodological necessity?. *Journal of Mixed Methods Research, 5*(4), 276-292. doi:10.1177/1558689811412972

- Hauenstein, E. J., Clark, R. S., & Merwin, E. I. (2019). Modeling health disparities and outcomes in disenfranchised populations. *Community Mental Health Journal, 55*(1), 9-23.doi: 10.1007/s10597-018-0326-9

References

- Lawrenz, F., & Huffman, D. (2002). The archipelago approach to mixed method evaluation. *American Journal of Evaluation, 23*(3), 331-338.

- Lent, R., Brown, S., & Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic interest, choice, and performance. *Journal of Vocational Behavior, 45*(1), 79-122.

- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*(1), 68-78.

References

- Sandelowski M. (1993). Theory unmasked: The uses and guises of theory in qualitative research. *Research in Nursing & Health, 16,* 213-218.

- Sandelowski, M. (1999). Focus on qualitative methods: Time and qualitative research. *Research in Nursing & Health, 22*, 79-87.

- Sandelowski M. (2000). Combining qualitative and quantitative sampling, data collection, and analysis techniques in mixed-methods studies. *Research in Nursing & Health, 23,* 246–255.

- Archipelago image: juanmgeo.wordpress.com

UNIVERSITY OF DELAWARE

Thank you!

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