Key Methodological Considerations for Understanding Mentoring Relationships and Outcomes

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Nancy Deutsch – University of Virginia
Michael Karcher – UT-San Antonio
Michael Garringer – MENTOR (facilitator)
Welcome!

- Thanks to OJJDP for their support

- A few housekeeping things...
  - Phones are muted during the webinar to ensure a good recording
  - Questions for our presenters can be submitted via the Question panel
  - We will leave time for Q&A (we will run until 2:15)

- Slides/recording will be available within a few days (via NMRC site)
Introductions!

Sam McQuillln – University of South Carolina

Nancy Deutsch – University of Virginia

Michael Karcher – UT-San Antonio

Michael Garringer – MENTOR

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Background

- Work of the NMRC Research Board offers unique view on mentoring research
  - Challenges measuring the important aspects of mentoring interventions
  - Challenges of detecting effects of mentoring
  - Methodologies that can cut through the noise
  - Types of research that can help improve programs and strengthen outcomes

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Goals and Objectives

• Review methodological considerations for evaluating mentoring program operations and outcomes
  – Understanding program processes by evaluating specific practices
  – Mixed methods approaches to telling a more complete story of relationships and program success
  – Examples of study designs that revealed interesting truths about what was happening in programs
Clarifying Program Practices
Measuring Mentoring Behaviors

Sam McQuillin
University of South Carolina

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Assumptions

1. Programs have expectations for what mentors do and don’t do with mentees.
   – Mentors’ “behavioral domain”
     • Mentoring practices and competencies
       – What do we expect them to do, how do we expect them to do it?
       – Why do we expect these what and how’s to influence outcomes?
Assumptions

2. These expectations are logically connected to desired outcomes.
   - If mentors X, then mentees are more likely to Y
     • There is usually some good reason to believe this is the case
   - A likely range of outcomes produced by practices
     • Mentees achieve higher grades
     • Relationship satisfaction will be stronger
     • Mentees will feel more connected to society
     • Etc.
Assumptions

3. Unless programs measure practices, it’s hard to logically connect these practices to outcomes.
   - Testing our theory of “why” we think mentoring should work before we test “if” mentoring works.
Errors in Assumption 3

• Error 1: We evaluate a program, it works, and we do not know why.

• Error 2: We evaluate a program, it doesn’t work, and we don’t know why.
Three Suggestions

1. Evaluate practices before programs
2. Measure mentoring contact events
3. Set performance metrics
Three Suggestions

• Evaluate practices before programs
  – We should not evaluate a program before we measure the domain of practices included in the program
  • We cannot produce useful or meaningful evaluation research without understanding program practices
  • We might find we have less faith that the program is capable of producing effects after testing our expectations against implementation
    – Save time, money, grief, and confusion
Three Suggestions

• Measure mentoring practice behavior
  – Clarify the reason we suspect mentors move the needle on mentee outcomes
  – Postulate expected metrics for these reasons
  – Evaluate routine practice against expected metrics
  – Attempt to “falsify” a program’s theory of why we should think mentoring works.
Three Suggestions

• Set performance metrics “a priori”
  – Use existing science or reasoned consensus to estimate the minimally sufficient qualities of a practice.
  • For this practice, what is the bare minimum that we suspect mentors could do and still help mentees?
  – Presence, consistency, quality metrics
Be Someone Who Matters to Someone Who Matters

BECOME A MENTOR

LEARN MORE

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• The AMPED mentoring program
  – Academic Mentoring for Education and Development
  – A brief instrumental mentoring program
    • Instrumental activities include training in agenda keeping, organization, mood monitoring, etc.
  – Instrumental activities are facilitated through Motivational Interviewing
Evaluating Practices Before Programs

• **Our practices included**
  – Fidelity to curriculum modules
  – Procedural integrity
    • Moving from building a connection, to identifying and discussing values, to setting goals, and identifying instrumental supports, etc.
  – Various soft practices
    • Greeting the mentee at the beginning of a meeting, Sending notes on off-days, visiting teacher’s with the mentee, etc.
Measure Mentoring Practice Behavior

• AMPED theory for why practices should work
  – We believed that practices should work if mentors use verbal behavior consistent with MI.
  – We audio recorded training, and live mentoring conversations between simulated and actual mentees.
Some program assumptions

• Empathic reflections help mentees feel understood and validate feelings.
• Change oriented open ended questions encourage self exploration and change talk.
Measuring Conversations

– Mentee: “I am doing okay right now, but maybe I could do a little better in math.”

– Mentor: “Have you thought about using more notecards?”

Mentor responds with closed question, does not express understanding, jumps to solutions, and doesn’t solicit the mentee’s ideas for how to succeed.
Measuring Conversations

– Mentee: “I am doing okay right now, but maybe I could do a little better in math.”

– Mentor: “You’ve really got to get it together!”

Mentor responds with confrontation.
Measuring Conversations

– Mentee: “I am doing okay right now, but maybe I could do a little better in math.”

– Mentor: “You’re not quite satisfied with your grade, and you might want to try something new.”

– Mentor: “What will you do?

The mentor expresses empathy, emphasizes change talk, and then asks for the mentees perspective on the solution using an open ended question.
Set Performance Metrics

• Motivational Interviewing Measurement
  – The Motivational Interviewing Treatment Integrity Code.
    • Used to code transcribed conversations and evaluate consistency with the spirit of MI.
  – Example metrics
    • Questions to reflections ratio:
      – 1:1 is considered acceptable, 2:1 is considered good
    • Confrontations or attempts at persuasion
      – Not MI consistent
Examples of Non-Prescriptive Practices

• Memorable experiences
  – Conducting qualitative interviews to identify mentees top memorable experiences.
    • “What’s been your most memorable experience this semester?”
    • “How about in AMPED, can you tell us about a memorable experience?”

• Fun and mentee-selected entertainment
  – Creating a list of possible activities, interviewing mentors to identify the frequency; interviewing mentees to understand their perspective.

• Leadership opportunities
  – “What does being a leader look like to you?”
  – “Can you tell me of a time AMPED helped you be a leader?”
Extending these suggestions

1. **Form a committee, create an exhaustive list of practices**
   - Use a planning meeting to list all of the mentoring behaviors that we expect mentors to do, and 2) believe should influence outcomes.

2. **Identify practice priorities democratically**
   - Give each committee member 3 tokens, and have everyone prioritize the practices by voting. Encourage others to share their case, and re-arrange if necessary.

3. **Discuss priority practices (top 2-3)**
   - Why should we expect these practices to influence our mentees?
     - Is there good science or reasoned consensus for this?
   - If this practice is implemented, what are the possible ranges of implementation?
   - Do we have reasonable expectations that they will have the knowledge, capacity, competence to actually do these things?
Extending these suggestions

4. Identify methods to measure practices.
   • Experience Sampling Methods, Audio Records, Live Supervision, Structured Interviews, Self-Report (do not over-rely on self-report), etc.

5. Set “a priori” standards for minimally sufficient performance metrics

6. Start small, expand gradually
Mixed Methods Mentoring Research

Telling a more complete story

Nancy Deutsch
University of Virginia

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What is Mixed Methods?

- Numeric vs. non-numeric ways of representing the world
- Strengths and weaknesses of each
- Complexity of goals of social science and education research

“the combination of words and numbers can bring us closer to the complexity of developmental change by providing divergent as well as convergent data”

(Yoshikawa, Weisner, Kalil & Way, 2008, p. 345)
The Black Box of Mentoring

Youth Background and Life Outside Mentoring Program

Mentoring Program
Mentoring Relationship

Youth Outcomes

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Combining Strengths and Analytic Techniques

• Quantitative Studies
  • Seek generalizability
  • Control for variables that are associated with context
  • Positivist & post-positivist paradigms

• Qualitative Studies
  • Examines qualities, meanings, and processes within natural settings
  • Exploring the construction of meanings rather than measuring their quantity
  • Transferability, not generalizability
  • Interpretive and constructivist paradigms
Design Considerations

- **Level of Integration** (or mixing) of the methods
  - partial or full

- **Order** in which methods are used
  - concurrently or sequentially

- **Priority** given to one method in relation to each other
  - which method is dominant

- **Goals** of the method with regards to the research questions
  - e.g., exploration, confirmation, triangulation, etc.
Purposes of Mixed Methods Research (Greene, Caracelli and Graham, 1989):

1. Triangulation
2. Complementarity
3. Development
4. Initiation
5. Expansion
Designs
(Cresswell, et al, 2003)

- QUAL + QUAN
- qual + QUAN
- QUAL + quan
- QUAL ➔ QUAN
- qual ➔ QUAN
- QUAL ➔ quan
- QUAN ➔ QUAL
- quan ➔ QUAL
- QUAN ➔ qual

+ • Concurrent triangulation
  • Concurrent nested

+ or

• Sequential explanatory
  • Sequential exploratory

• Transformative
Data Collection for Mentoring

• Surveys
  – Quantitative
  – Open-ended
• Interviews
• Focus Groups
• Observations
• Diaries
• Visual techniques

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Analysis

Data

Separate

Integrated

Researchers

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Typology of Analysis Techniques
(Teddlie & Tashakkori, 2009)

• Parallel
• Conversion
• Sequential
• Multilevel
• Fully Integrated
• Application of analytical techniques from one tradition to the other
Considerations & Challenges

- Expertise needed on research team
  - Breadth and depth
- Sample Size
- Balancing of resources
  - Resource intensive
**Resources**

- **Dedoose Software**
Examples of Mixed Method Studies

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University of Texas - San Antonio
The SMILE that says mentoring too often doesn’t work

24 June 2008

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SMILE: Sequential explanatory (quan → QUAL)

(1) In year 1, 300 students were randomly divided into two groups. 1st group (control) received CIS counseling and related services; 2nd group (mentees) received CIS services plus mentoring.

(2) Used literature, prior CIS activity logs, and activity-type theory, we identified types of activities and created a mentor log.

(3) Collected connectedness data at the beginning and end of school year 1; ran regression model predicting change in teacher connectedness from two types of mentoring activities.

(4) We identified and interviewed mentees from year 1 who were outliers in regression models about their match experience.

(5) Created survey of experiences from the interviews. In year 2, 168 new youth entered study. Surveyed all with new survey.

(5) Reran hierarchical regression models (3 above) adding new factors from survey to estimate the added variance explained.
End of Year One: Interview Outliers
(Youth not well predicted by model)

- Identified 12 youth under-predicted and 12 over-predicted by the regression model predicting end-of-year teacher connectedness from activities (vertical)
- Interviewed these mentees about factors that “enhanced connectedness to mentors”
- We used this qualitative data to develop survey items based on their responses
InspireU

An Agency-School-Workplace Mentoring Program

Goal: Help youth graduate and prepare for life after high school, engage youth with caring adults, develop a post-high school plan

• 30 schools
• 50 businesses
• 500 students and mentors
• 2 Mentoring support agencies (BBBS ST/ CIS SA)

Endorsed and supported by the Office of Major of San Antonio Julian Castro

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InspireU: Sequential exploratory (QUAL→quan)
Identifying Essential Elements of Program

- 9 Observations (YPQA measure)
- Staff Interviews about most important practices
- Log data from mentors in BBBS-South Texas
- Focus Groups with program staff for consensus
- Collected 350 Mentor End-of-Year-Surveys
Questions?

• Use the Question Panel on the screen to submit your questions!
Reminder!

• Look for email with slides and recording

• Programs can request free technical assistance, including planning support on evaluative work

• Look for Measurement Guidance Toolkit updates over the summer

• Please fill out evaluation that pops up!!!!

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On behalf of the NMRC and OJJDP...

Thank you!!!