Designing and Conducting Research on Policy Implementation: Multiple and Mixed-Methods for Implementation Research
Acknowledgement

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In the late 1980s, mixed methods designs were characterized as those that included:

- at least one quantitative method and
- at least one qualitative method
Mixed Methods Research - Refined

• In the late 1990s, the definition evolved to a methodological orientation with mixing in all phases of the research process, including inferences and interpretation of results.
• Also called mixed model research (Teddlie & Tashakkori 2003)

Mixed Methods Research - Refined

In 2007, a composite definition based 19 definitions provided by 21 highly published mixed methods researchers:

“Mixed methods research is the type of research in which a researcher or team of researchers combines elements of qualitative and quantitative research approaches (e.g., use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the purposes of breadth and depth of understanding and corroboration”

Five Major Purposes for Mixed-Method Design (Green et al., 1989)

- Triangulation
- Complementarity
- Development
- Initiation
- Expansion
Core Characteristics of MM Research

- Collects and analyzes both qualitative and quantitative data, based on research questions.
- Mixes, integrates or links the two forms of data concurrently by combining or merging, sequentially by having one build on the other, or embedding one within the other.
- Gives priority to one or to both forms of data, based on what the research emphasizes.
- Uses these procedures in a single study or in multiple phases of a program of study.
- Frames these procedures within philosophical worldviews and theoretical lenses.
- Combines the procedures into specific research designs that direct the plan for conducting the study.

Some Major Mixed Methods Designs

- Convergent parallel design
- Explanatory sequential design
- Exploratory sequential design
- Embedded design
- Transformative design
- Multiphase design
Convergent Parallel Design

Quantitative Data Collection and Analysis

Qualitative Data Collection and Analysis

Compare or relate

Interpretation and reporting
Multiphase Design

• Combines the concurrent and/or sequential collection of quantitative and qualitative data sets over multiple phases of a study
• Each iteration builds on the previous studies
• Each is connected and focused on the primary study objective
• Multiphase designs can address a set of incremental research questions, focused around a central objective
• May be useful in comprehensive program evaluations
Example

• Physical Activity Policy Research Network Plus (PAPRN+) Collaborating Center

• Aims of PAPRN+:
  – Promote high quality research vital to the development, implementation, evaluation, and sustainability of policies, environments, and programs that increase physical activity, specifically walking.
  – Enhance translation of research into policy and practice and ensure that practice informs research by strengthening collaborations with a diverse array of stakeholders from key health and non-health sectors and taking interventions to scale.
  – Integrate translation, dissemination, and implementation research and practice into the training of key stakeholders from various sectors and future leaders in the field.
Project Background

Team: JHSPH, University of Maryland School of Medicine, Maryland Department of Health and Mental Hygiene (DHMH); “Workplace Policies Promoting Physical Activity”

Data from DHMH indicate that working Marylanders spend an average of 9.2 hours per day at work, which leads to a decrease in the amount of time available for exercise.

Several opportunities to promote physical activity at work.

In 2010, DHMH initiated Healthiest Maryland Businesses (CDC 1305), HMB, a state-wide worksite wellness promotion program, voluntary enrollment.
Research Aims

Determine which policies worksites in the HMB program are using to promote physical activity generally, and walking in particular.

Describe the decision process that businesses use to select specific policies that promote physical activity and walking, and compare this process to other health promotion policies (i.e., smoking cessation).

Determine the facilitators and barriers related to implementing policies that promote physical activity generally, and walking in particular. We will explore both the barriers to design/implement a policy and the barriers for policies leading to employee behavior change.

Identify potential policy successes for physical activity generally, and walking in particular among a subset of worksites in the HMB program.
Methods: Quantitative

- CDC Worksite Health ScoreCard:
  - 16 domains/ 122 questions that assess how evidence-based health promotion strategies are implemented at a worksite
  - Focusing on Worksite Demographics, Organizational Supports, Physical Activity, Community Resources
  - Wave 1 (2014): n=114
  - Wave 2 (2015): n =~90; added additional physical activity policy questions; question about consideration for case study
Methods: Qualitative

- Semi-structured key informant interviews with HMB regional coordinators and overall coordinator
- Multiple case study
  - Sampling for heterogeneity
  - HMB data
  - Semi-structured interviews
- Data
  - Reach, effectiveness, adoption, implementation, maintenance, barriers
Conclusions

• Mixed methods are particularly useful for implementation science

• Need for more expertise and resources when using mixed methods

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Resources and Select References


