

INTEREST TRANSCRIPT Issues RESPONSIBLE NARRATIVE context
DMR CASE STUDY Transferability TRUSTWORTHY ISSUES THEME DEPENDABILITY Observation opinion Theme
DMR KEY INFORMANT INTERVIEW INTEREST FRAMEWORK ANALYSIS context
DMR Reflexibility NOTE TAKING Credibility OUTLINE TRIANGULATION TRANSFERABILITY context ISSUES
Theme NOTE TAKING Grounded Theory TRIANGULATION OPINION Outline Issues context
Key Informant Interview Research CREDIBILITY Observation ETHICAL Content Analysis THEME
Note taking Confirmability PURPOSIVE SAMPLING Case study Dependability
In depth Interview DMR Issues ding opinion Confirmability DISCOURSE ANALYSIS interpret Ethical

Qualitative Methods in Health Research

NARRATIVE TRUSTWORTHY Dependability Integrity REFLEXIBILITY Outline DMR
DMR Issues DEPENDABILITY DMR ON INTEREST CODING OPINION ISSUES
DMR NARRATIVE INTEGRITY DMR ch DMR opinion DMR GROUNDED THEORY
Focus Group Discussion Trustworthy Observation understanding DMR
Outline PURPOSIVE SAMPLING Issues interpret Coding TRANSCRIPT UNDERSTANDING DMR
DMR OPINION DMR Issues Framework Analysis THEME DMR INTERPRET DMR understanding DMR
DMR Phenomenology DMR Issues CONFIRMABILITY CASE STUDY DMR
INTRODUCTION Note taking DMR COMMUNITY CONTENT ANALYSIS DMR
OBSERVATION DMR Integrity DMR CONTEXT DMR Issues INTRODUCTION CONFIDENTIALITY
Issues Note taking DMR Community Coding INTRODUCTION CONFIDENTIALITY Theme DMR Content Analysis

Mixed-Methods Research Design: What, Why, When and How?



Workshop on Qualitative Methods in Health Research

Background

Definitions and names for mixed-methods research have evolved with the field over 20-30 years.

Combining the **Power of Stories** and the **Power of Numbers**

What is Mixed Methods Research?

**QUALITATIVE
DATA**

COLLECTION

**COMPREHENSIVE
UNDERSTANDING
OF HEALTH ISSUES**

&

**QUANTITATIVE
DATA**

ANALYSIS

**POTENTIAL
RESOLUTIONS**

**It is a commonly used design in
Implementation Research.**

WHY MIXED METHODS?



Real-life Contextual
Understandings

Multi-level Perspectives

Socio-cultural Influences

Rigorous
QUANTITATIVE RESEARCH
that **assesses**
the magnitude and
frequency of constructs



Rigorous
QUALITATIVE RESEARCH
that **explores**
the meaning and
understanding of constructs

WHEN IT IS APPROPRIATE?

- Research issues most suitable for mixed methods are those in which **a quantitative approach or the qualitative approach alone is inadequate to provide a comprehensive understanding** about a research problem or question.

Applicability in Biomedical & Health Services Research

- Clinical or quality issues
- Health care organizational performance
- Behavioral interventions
- Processes of implementation of innovations
- Health care decision making
- Measurement development for complex constructs

HOW? : The Nature

Multiple sources & types of data



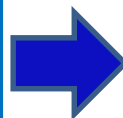
Geospatial, in-depth informant interviews, survey questionnaire, text messages, visual content

Systematically integrates & triangulates different types of data



Maximize the strengths & counterbalance the weaknesses of each data type

Develops & integrates conceptual and theoretical frameworks



Development of research questions

HOW?: Different Designs

**CONVERGENT/
PARALLEL/
CONCURRENT**

**EMBEDDED/
NESTED**

**SEQUENTIAL
(EXPLANATORY)**

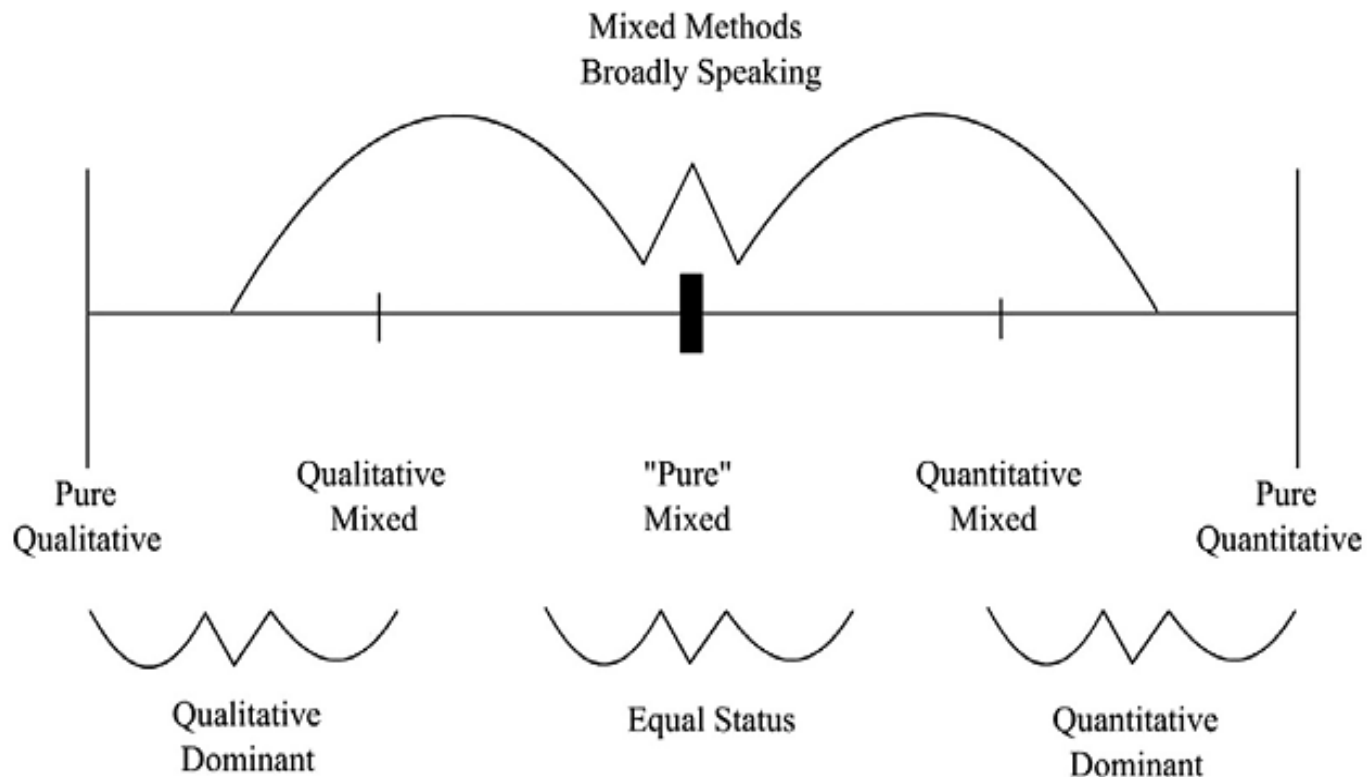
**MULTI-PHASE
PROJECTS**

**SEQUENTIAL
(EXPLORATORY)**

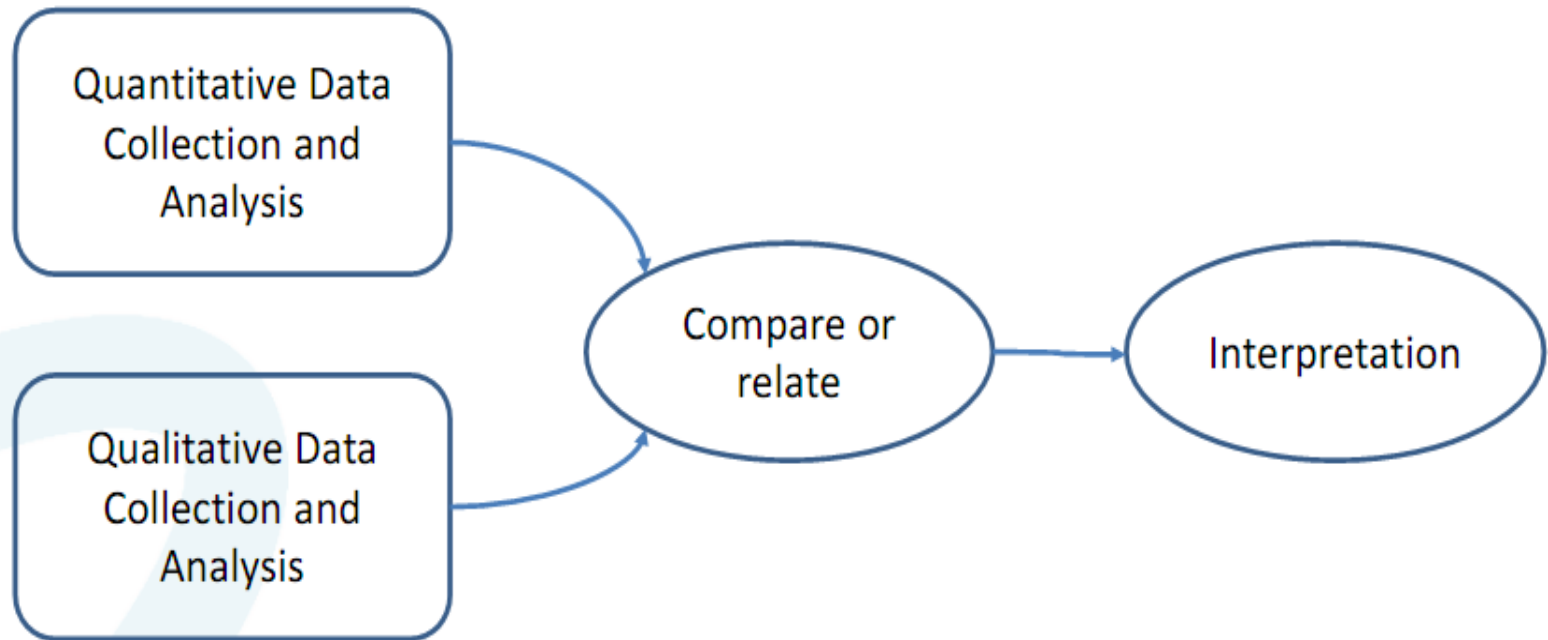
TRANSFORMATIVE

SUB-TYPES

Figure 1
Graphic of the Three Major Research Paradigms, Including Subtypes
of Mixed Methods Research



CONCURRENT MIXED METHODS DESIGN



EXAMPLE: CONCURRENT MIXED METHODS DESIGN



- To identify the **barriers & facilitators** (determinants) of guidelines use among neurologists



- To propose **a strategy to improve guideline** implementation.

- A cross-sectional survey of neurologists by mailing
 - Focus groups & interview



- Knowledge to Action (KTA) framework

Example: An exploratory sequential mixed methods study

**A Systematic
Review**



**Qualitative Studies
Patients [n=17]
Health
Professionals
[n=18]**



**Design & Conduct
Online Survey
[n=233]**

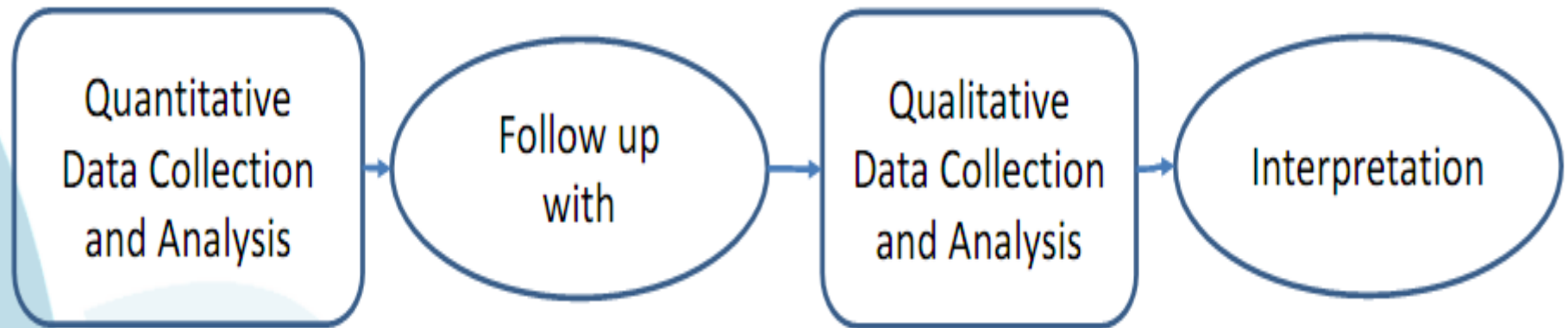
Qualitative Data
Collection and
Analysis

Follow up
with

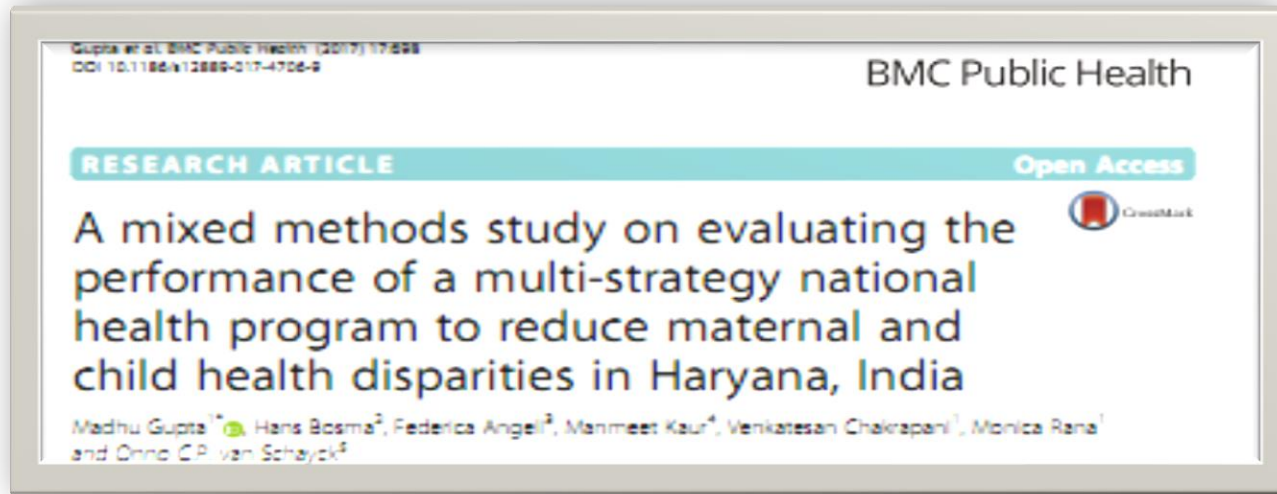
Quantitative
Data Collection
and Analysis

Interpretation

An explanatory sequential mixed methods study



Example: An explanatory sequential mixed methods study



To assess the degree of implementation & the effectiveness of MCH plans by comparing **Demographic Health Surveys data** conducted post **(2012–13)**, during (2007–08) and pre-(2002–04) **[QUANTITATIVE]**

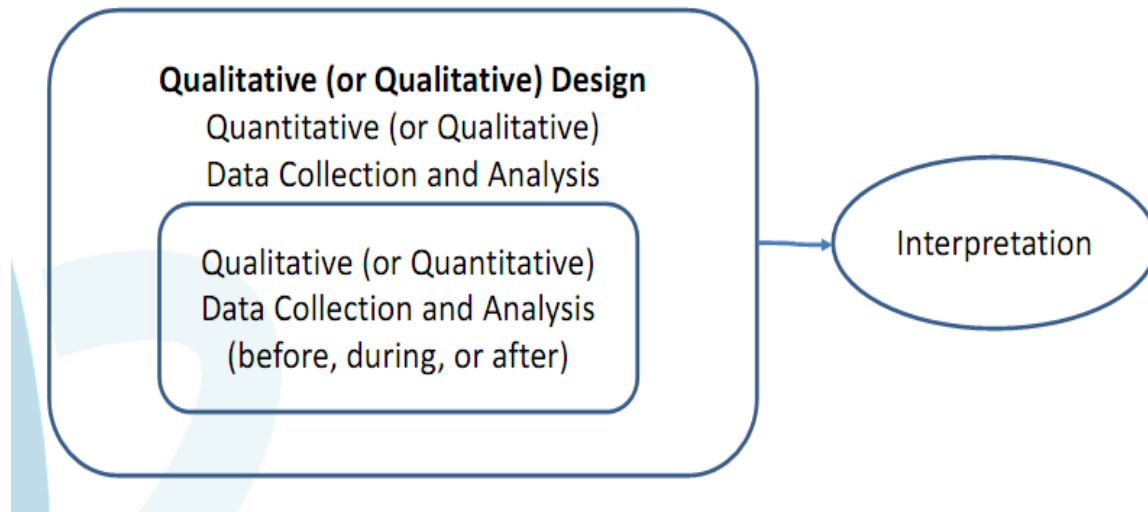


Perceptions and beliefs of stakeholders regarding extent and effectiveness of NRHM in Haryana were explored in the **QUALITATIVE** study during **2013**.

Example: An explanatory sequential mixed methods study

Nature of Data	Source
Quantitative data	Large patient Registry
Qualitative Data	In-depth interview of patients
Development of construct	Creating and testing of items with heart patients
Establish Content Validity	Surveying an Expert Panel
Implementation Opportunities	In-depth interviews with health-care providers

EMBEDDED DESIGN



Research Evaluation, 28(1), 2019, 37–50

doi: 10.1093/reseval/rvy023

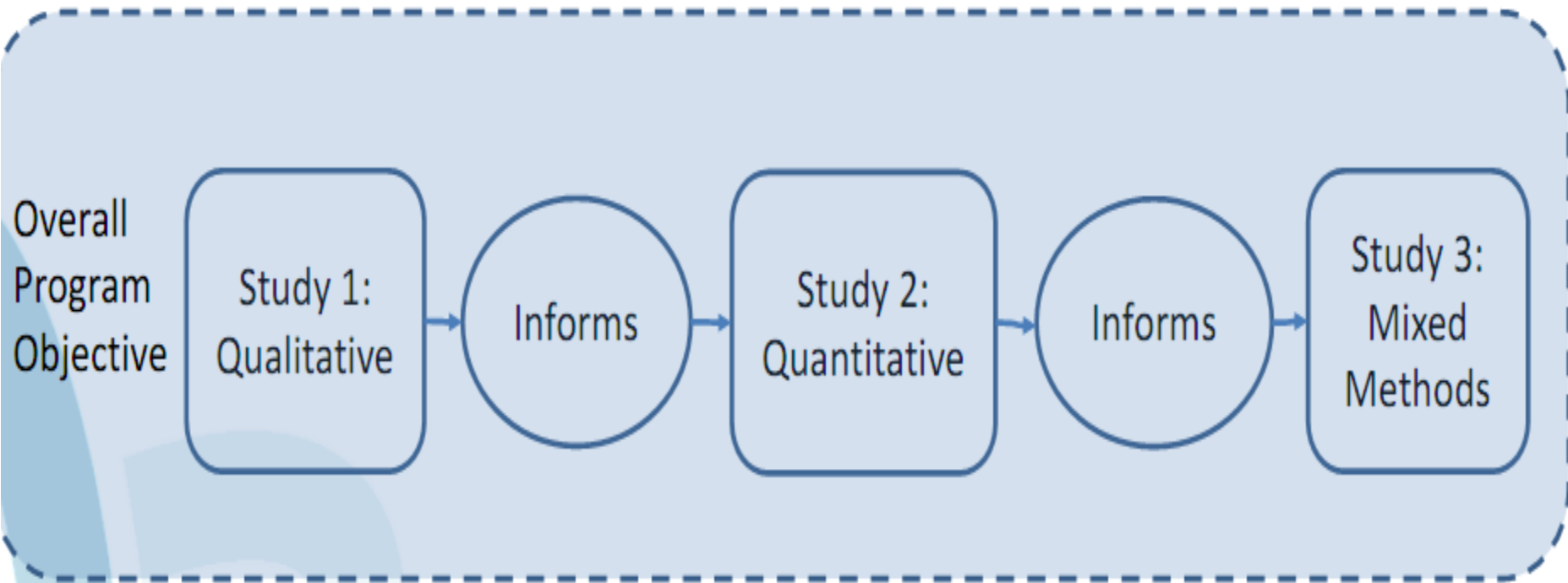
Advance Access Publication Date: 3 August 2018

Article

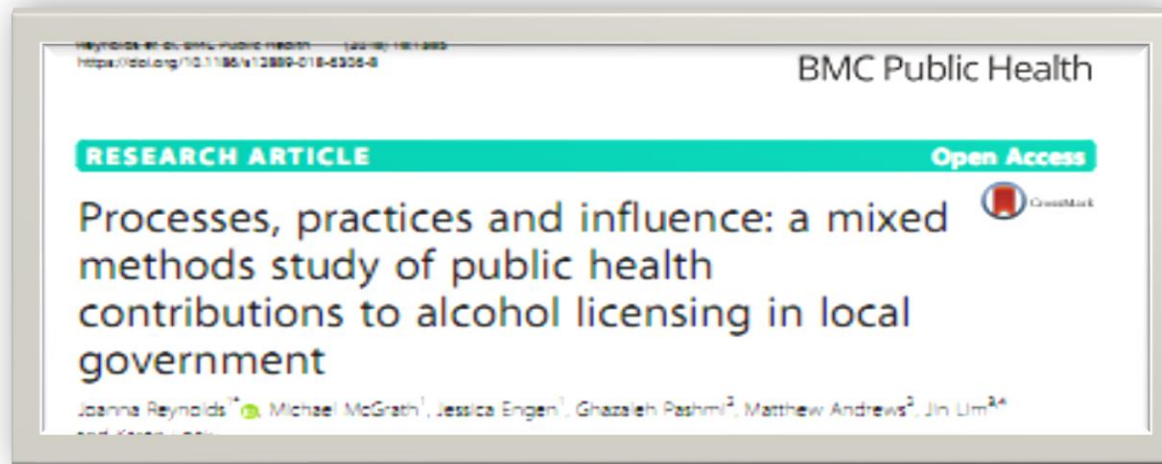
Formative, embedded evaluation to strengthen interdisciplinary team science: Results of a 4-year, mixed methods, multi-country case study

Susan Roelofs^{1,*}, Nancy Edwards¹, Sarah Viehbeck^{2,3}
and Cody Anderson⁴

Multiphase Design



EXAMPLE: A MULTI-COMPONENT, MIXED METHODS STUDY



Ethnographic observation of public health practitioners' alcohol licensing work

A survey of public health practitioners ($n = 18$); interviews with licensing stakeholders ($n = 10$);

Analysis of public health licensing data

Transformative Design

- This type of design also has two phases, but allows the **theoretical perspective** of the researcher to guide the study and determine the order of data collection.
- This perspective guides all methodological choices and the purpose is to evaluate that perspective at different levels of analysis.

Data Analysis & Interpretation

Data analysis and interpretation

- Quantitative
- Qualitative
- Integration/Merging Procedures

In **sequential implementation** of the quantitative and qualitative methods, investigators often discuss the collection and **analysis of the first type of data** (quantitative or qualitative) and then discuss the collection and **analysis of the subsequent type of data** (qualitative or quantitative).

Integration of Multiple Forms of Data

Connecting data

Analyzing survey data, use the results to inform subsequent data collection (eg. selection of participants to interview)

Building data

Results from one dataset informs a subsequent approach to collect data.

Merging data

Combines qualitative data with quantitative data to compare, analyze. and discuss.

EMBEDDING data

Systematically linking the collection of qualitative to quantitative data at multiple points. One secondary dataset can be embedded within a larger, primary design.

Research Team

- The **PRINCIPAL INVESTIGATOR** of a mixed methods team **need not hold consummate expertise** in any one approach
- Must have **sufficient expertise** across approaches to be able to cultivate synergy
- **Resolve** differences among team members with more distinct expertise
- **Support** team members' education in different methodologies when needed.

- **RESEARCH TEAM MEMBERS** should be open to a mixed methods perspective
- It is **not necessary** or possible for all investigators **to hold expertise in all methods** in any research project.

Added Values

**Can Answer
New Research Questions**

**Hard to
Measure
Constructs/
Variables**

**COMPLEX
PHENOMENA**

**Interactions in
specific
settings,
context,
experimental
settings**

**Can speed translation from a tested
intervention to evidence-based interventions
in real-life settings**

Methodological Challenges

RESOURCES

TEAM WORK

**SAMPLING
ISSUES**

**ANALYTIC &
INTERPRETIVE
ISSUES**

SUMMARY

Counts as “Mixed” when:

1. At least one QUAL and one QUANT method used
2. Each method is used rigorously
3. Data collection &/or analysis &/or results are integrated

➤ What

- Focus groups, structured interviews, ethnographic field techniques, etc.

➤ When & where

- Throughout research process

➤ Why

- To inform development and refinement of interventions and implementation strategies
- To identify barriers and facilitators
- To illustrate context

Key References

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THANK YOU

