

Mixed methods in health care research Paradigms and philosophy

SALLY KENDALL

Professor of Community Nursing and Public Health

University of Kent

UK

When to use mixed methods?

- When an intervention or research question is complex:
- Different and more than two interacting components within the experimental and control interventions
- Number and difficulty of behaviours required by those delivering or receiving the intervention or involved in the phenomenon
- Number of groups or organisational levels targeted by the intervention or involved in the research
- Number and variability of datasets, possible findings
- Complex context or cultural environment

Purpose of Mixed methods

- Purpose of mixed methods (Moran Ellis et al 2006):
- Increasing accuracy of research findings
- Increasing the level of confidence
- Generating new knowledge through synthesis of findings from different approaches
- Hearing different voices and multi-le constructions of a phenomenon
- Reflecting complexity and multi-faceted ontology
- Logically implementing a theoretical framework

Mixed methods or triangulation?

Whilst paradigms underpinning qualitative and quantitative research are incompatible, and therefore cannot be combined to provide a more accurate view of the 'truth', nonetheless the complexity itself consists of both interpretivist and positivist phenomena. From a theoretical explanation stand point triangulation can be seen as the bringing together of at least one macro/meso level and one micro-level of data (Kelle, 2001).

Continuum principle - the dichotomy between quantitative and qualitative is illusory, not recognised by applied researchers in practice. A single theoretical framework unites methods and data types in one paradigm (e.g. Pawson 1995).

Integration or combining methods?

Integration implies bringing together component parts that make the whole greater than the sum of its individual parts e.g. an integrated transport system. Integration of research methods suggests bringing together a relationship between methods that enables us to know more than we would with a single method. Combining methods does not involve integration and can be used to:

Qualitative methods can 'flesh out' quantitative findings (e.g. interviews, focus groups)

Qualitative methods can precede a survey to inform questionnaire content. Use of a specific method to support the overall research but to answer a different question.

Integrated methods

Pawson (1995) argues for an approach that fuses major

Domains:

- Structure and agency
- Individual and institutional
- Macro and micro

Pawson argues for showing HOW these domains are brought together analytically, not just a use of different methods (e.g. use of interviews to generate hypotheses that can then be used to test concepts in further qualitative and quantitative methods)

Theoretical integration

- Separate methods
- Separate analysis
- Theoretical integration

- Each set of findings is brought together in one explanatory framework

- Contradictions, divergences and convergences in the data are only reconciled at the point of interpretation and explanation.

What happens when mixed methods findings conflict?

Moffat et al 2006 undertook a pragmatic RCT to investigate the effect of an educational intervention about welfare rights for people over 60 on their health.

They found different findings in the quantitative and qualitative components

Describe six ways of exploring the data further:

- Treating the methods as fundamentally different
- Exploring the methodological rigour of each component
- Exploring dataset comparability
- Collecting further data and making further comparison
- Exploring the process of the intervention
- Exploring whether the outcomes of the two components match

Moffatt S., White M., Mackintosh J. and Howel D. 2006
Using quantitative and qualitative data in health services research
- what happens when mixed methods conflict?
BMC Health Services Research 6, 28

Moran-Ellis, J, Alexander V., Cronin A., Dickinson M.,
Fielding J., Sleney J. and Thomas H. 2006
Triangulation and integration: processes, claims and implications.
Qualitative Research, 6,1, 45-59

Morgan D. 2007 Paradigms Lost and Pragmatism Regained: Methodological
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J. Of Mixed Methods Research, 1,1, 48-76

Pawson R., 1995 Quality and Quantity, Agency and Structure,