A Review of Knowledge Transfer Conceptual Models, Frameworks and Theories to Facilitate Best Practice Implementation

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- 3 countries,
- 6 universities,
- 9 disciplines (education, geography, library science, management, medicine, nursing, population health, psychology, sociology)
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Background

- Knowledge translation is a relatively new field of inquiry in health care
- Many existing knowledge translation theories are either not known or poorly understood due to disciplinary divides
- Tendency for most best practice implementation projects to take a largely atheoretical approach
- As is the case with all developing sciences, the success of the field is related to its theoretical foundation
- Work is needed to identify knowledge transfer theories that have been developed in various disciplines and to critically review them to determine their similarities, differences, strengths and limitations
Objectives

1) To conduct a focused search for conceptual models, frameworks, or grand theories of knowledge translation (planned change)

2) To undertake a theory analysis of the identified models to determine their strengths and limitations and to determine similarities and differences among them

3) To determine the extent to which each model has been used and/or tested.

4) Produce a users-guide to the theories (theories catalogue, synthesis of theory analysis)
Classical theories/models of change

- sometimes referred to as descriptive or normative theories
- are passive
- explain or describe how change occurs
- Examples:
  - Roger’s diffusion theory
  - Kuhn’s conceptualization of scientific revolutions
  - Lomas’s Coordinated Implementation Model
Planned change theories/models
What are they?

• refer to deliberately engineering change that occurs in groups that vary in size and setting.

• those who use planned change theories/models may work with individuals, but their objective is to alter ways of doing things in social systems.

• help planners or change agents control variables that increase or decrease the likelihood of the occurrence of change.
Characteristics of Planned Action Theories

- Explicitly state that goal of theory is to promote, plan or implement change
- Suggest steps/stages to assist in achieving the goal
- Focus on practitioner or organizational change and not on the public or consumers
Methods

• **Focused literature search of:**
  – health sciences, (underway- social sciences, management, education) literature (over 4,000 hits)
  – internet

• **Still to be done**
  – hand searching of the journals Science Communication; Knowledge, Technology and Policy
Methods

• Theory analysis:
  – A theory analysis is a systematic examination of a theory or theories and is an essential component of theory development (Walker and Avant, 2004).
  – The purpose of a theory analysis is to determine the strengths and limitations of a theory.
  
  – During the theory analysis, we aim to:
    • determine the origins;
    • examine the meaning;
    • analyze the logical consistency;
    • define the degree of generalizability and parsimony; and
    • determine the testability of each theory
  
  – The analysis is being conducted using a standardized data abstraction form
  – At least 1 co-investigator and 1 research assistant abstracts data on each theory
  – Disagreements are resolved by consensus
Results

• Data presented today based on 30 models/frameworks:
  – 14 frameworks
  – 16 models

• Year published:

• Country of origin:
  – USA (n=10)
  – Canada (n=7)
  – UK (n=4)
  – Netherlands (n=2)
  – Not stated (n=7)
Results

• Intended focus:
  – Health care (n=25)
  – Management (n=3)
  – Psychology (n=1)
  – Social work (n=1)

• Disciplines:
  – Nursing (n=9)
  – Interdisciplinary (n=8)

• Intended audiences:
  – Administrators/managers (n=21)
  – Practitioners (n=20)
  – Researchers (n=15)
  – Policy makers (n=10)
  – Patients (n=4)
  – Public (n=3)

• Intended Purpose:
  – Guide practice (n=22)
  – Guide research (n=5)
  – Guide theory (n=1)
Results

• **Source of the theory:**
  – Literature (n=18)
  – Research (n=5)
  – Experience (n=3)
  – Not stated (n=4)
Results

• Terms used to mean ‘knowledge to practice’:
  – Knowledge transfer/ research transfer/technology transfer/information transfer/ innovation transfer/ best-practice transfer (n=15)
  – Evidence/research based (n=9)
  – Dissemination (n=5)
  – Diffusion/knowledge diffusion (n=5)
  – Implementation (n=5)
  – Knowledge utilization/uptake of research findings (n=4)
  – Knowledge translation/translating evidence into practice/translating scientific knowledge (n=3)
Results

What components are in the models?

- Major conceptual categories or factors:
  - Knowledge/Innovation
    - Evidence to be transferred
    - Evidence behind knowledge
    - Development of knowledge
    - Actionable messages
    - Attributes of the change
  - Audience concerns
  - Context and culture
    - Resources and support
  - Implementation related factors

- Major action categories:
  - Identify the problem
  - Identify a need for change
  - Assess barriers
  - Review evidence/literature
  - Tailor intervention
  - Implement the change
  - Evaluate
    - Outcome evaluation
    - Pilot testing
    - Process evaluation
  - Disseminate
  - Maintenance of change
  - Linkage
Results

• **Logical consistency:**
  - Not as easy as we thought it would be to assess (i.e. fairly subjective)
  - Still working out how to determine logical consistency
  - On first pass, none seem to lack logical consistency

• **Empirical testing:**
  - Yes (n=9)
  - No (n=21)

• **Generalizability:**
  - Yes supported with data (n=1)
  - Claimed but no data (n=4)
  - Seems to be (n=23)
  - Not sure (n=2)
Conclusions

• There are lots of planned action theories out there
• Nursing responsible for 1/3 of models/frameworks
• Many models/frameworks have concepts in common
• Most models/frameworks have not been tested
• Generalizability of the models/frameworks is largely not known

Practice/Policy Implications

The information provided will have the potential to:
• increase understanding of research utilization and may be useful to guide best practice implementation endeavors
• may also provide foundational information upon which new theories or frameworks of knowledge translation may be derived.
Next Steps

- Complete the search for theories/models
- Survey theory/model originators
- Conduct bibliometric analysis for data on testing & use of the theories/models
- Refine the analysis
- Create KT theories user-guide