

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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CIHR IRSC

ICEBeRG

Improved Clinical Effectiveness through
Behavioural Research Group



GReBECI

Groupe de Recherche Behaviorale sur
l'Efficacité Clinique Interdisciplinaire

- Our research staff: Nicole Robinson, Christine Davies, Tyler Johnson, Louise Zitzelsberger

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:
 - 1994-2005 (Median 2000)
- 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)
- **Intended Purpose:**
 - Guide practice (n=22)
 - Guide research (n=5)
 - Guide theory (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)

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