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Behavioural approaches to knowledge translation



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Background

- Consistent evidence of failure to translate research findings into clinical practice
 - 30-40% patients do not get treatments of proven effectiveness
 - 20–25% patients get care that is not needed or potentially harmful
- Suggests that implementation of research findings is fundamental challenge for healthcare systems to optimise care, outcomes and costs

Schuster, McGlynn, Brook (1998). *Milbank Memorial Quarterly*

Grol R (2001). *Med Care*

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Traditional approaches to knowledge translation

**ISLAGIATT
principle**

**‘It Seemed
Like A Good
Idea At The
Time’**

Martin P Eccles

Traditional approaches to knowledge translation

Cluster randomized trial of a guideline-based open access urological investigation service

RE Thomas^a, JM Grimshaw^{a,b}, J Mollison^c, S McClinton^d, E McIntosh^e, H Deans^f and J Repper^{g,h}

Thomas RE, Grimshaw JM, Mollison J, McClinton S, McIntosh E, Deans H and Repper J. Cluster randomized trial of a guideline-based open access urological investigation service. *Family Practice* 2003; **20**: 646–654.

Background. Out-patient services are trying to achieve effective and efficient health care in overcrowded, busy clinic settings. 'One stop' and 'open access' clinics have been advocated as a way of improving out-patient services.

Objectives. Our aim was to evaluate the effectiveness and efficiency of a guideline-based open access urological investigation service.

Behavioural approach to Knowledge Translation

- Implementation depends on behaviour
 - Citizens, patients, health professionals, managers, policy makers
- To improve care, we need to change behaviour
- To change behaviour, it helps to understand determinants of current behaviour and how behaviour changes

Eccles et al (2006) *Journal of Clinical Epidemiology*

Behavioural approach to Knowledge Translation



Journal of
Clinical
Epidemiology

Journal of Clinical Epidemiology 58 (2005) 107–112

VARIANCE AND DISSENT

Changing the behavior of healthcare professionals: the use of theory in promoting the uptake of research findings

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Abstract

Objective: The uptake of research findings into routine health care is a haphazard and unpredictable process. The usefulness of the results of implementation studies is limited, due in part to the lack of an underlying framework of the important dimensions of research studies in this area and the healthcare settings within which they are conducted and may subsequently be used.

Study Design and Setting: We explore the role for a theory-based framework and suggest some of the methods that would be needed to operationalize the framework in the context of designing and conducting interventions aimed at improving the use of research findings by individual healthcare professionals or teams.

Conclusions: This research offers a framework for those who would seek to use the results of such studies in routine healthcare settings. © 2005 Elsevier Inc. All rights reserved.

Keywords: Implementation research; Behavior change; Theory

Behavioural approach to Knowledge Translation



Journal of Clinical Epidemiology 58 (2005) 113–116

Journal of
Clinical
Epidemiology

VARIANCE AND DISSENT

The OFF theory of research utilization

“Well, I can see that it works in practice, but does it work in theory?”—Garret Fitzgerald

In this issue, Eccles et al. [1] argue that we need theory to promote the uptake of research findings. We have been invited to argue for a more pragmatic and less theory-driven approach. Unfortunately, we have to agree with the theory-driven approach. The problem is they have not selected the right theory.

To derive the correct theory, we consulted the Biology and Sociology department of HARLOT, Inc., which guarantees highly plausible theories to support otherwise patently unbelievable results [2]. They used traditional methods for theory development. A lot of thinking and some personal experience formed the basis for an iterative process for which we cannot account in any comprehensible way.

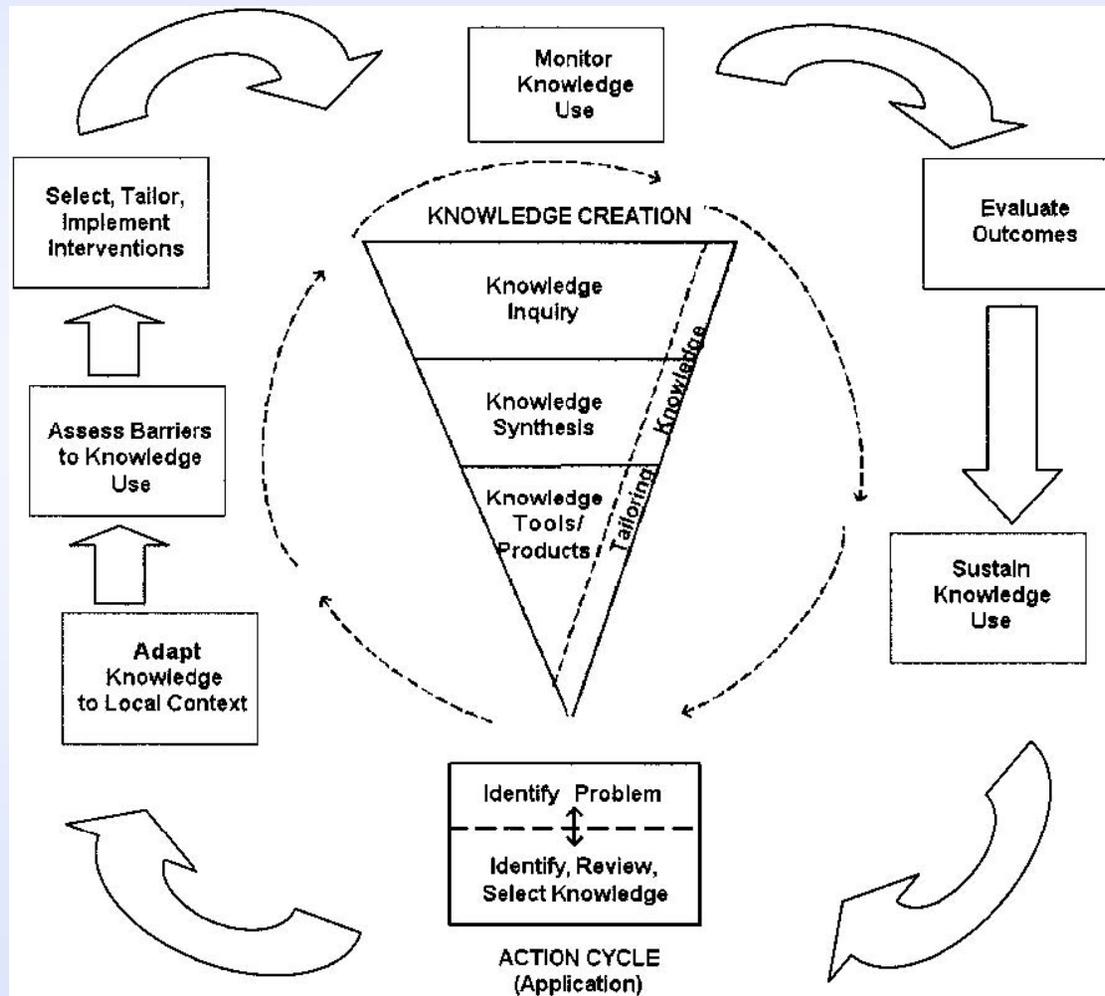
The OFF theory of research utilization can be summarized in a single sentence: You don't need a theory.

to avoid being labeled atheoretical, we needed to name our theory.

An alternative, continuous hierarchy of theories suggests that the number of boxes and arrows in a diagram of the theory is highly correlated with status and citations. Although our theory is delightfully simple, we have incorporated a large number of arrows in the diagram of our theory to avoid being labeled simplistic (Fig. 1) and to ensure future citations. Furthermore, we believe many will be impressed by the fact that by applying the model of our theory to the theory itself, a new diagram naturally evolves, and this time the arrows point in both directions (the OFF circle, Fig. 2).

Finally, to ensure our status and future citations, we have provided the OFF theory with an unsurpassed pedigree (Box 1). The lineage of the OFF theory can be traced back to Einstein, Emerson, and Yogi Bera, not to mention Kant, Mencken, and Douglas Adams. As with all good theories,

Knowledge to action cycle



Knowledge to Action loop

From: Graham ID et al. Lost in Knowledge Translation: Time for a Map? *Journal of Continuing Education in the Health Professions*, 2006

Single theory approaches

Salient beliefs and intentions to prescribe antibiotics for patients with a sore throat

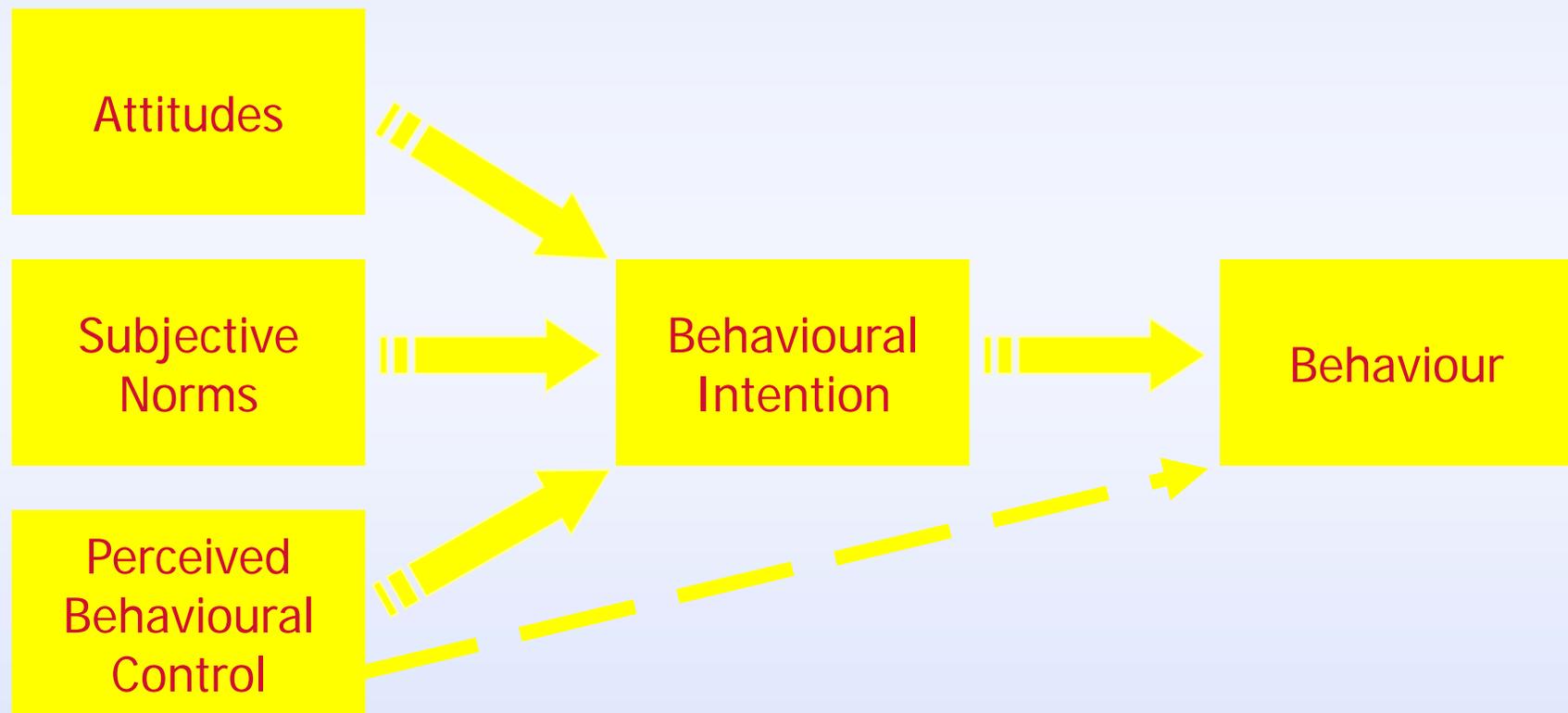
A. E. Walker,* J. M. Grimshaw and E. M. Armstrong

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Objectives. General practitioners (GPs) in the UK continue to prescribe antibiotics for patients with sore throats despite evidence that they are ineffective and can contribute to the growth of antibiotic resistance in the population. This study uses the theory of planned behaviour (TPB) to investigate the strength of intention to prescribe antibiotics, and to identify the salient beliefs associated with this intention.

Design. Cross-sectional study testing hypotheses derived from the TPB.

Theory of Planned Behaviour



Ajzen & Madden, (1986), *Journal of Experimental Social Psychology*, 22, 453

Multiple Theories Approach

BMC Health Services Research



Study protocol

Open Access

PRIME – Process modelling in Imple**M**entation research: selecting a theoretical basis for interventions to change clinical practice

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This article is available from: <http://www.biomedcentral.com/1472-6963/3/22>

Theoretical Domains Approach

ORIGINAL ARTICLE

Making psychological theory useful for implementing evidence based practice: a consensus approach

S Michie, M Johnston, C Abraham, R Lawton, D Parker, A Walker, on behalf of the "Psychological Theory" Group

Qual Saf Health Care 2005;14:26-33. doi: 10.1136/qshc.2004.011155

Background: Evidence-based guidelines are often not implemented effectively with the result that best health outcomes are not achieved. This may be due to a lack of theoretical understanding of the processes involved in changing the behaviour of healthcare professionals. This paper reports the development of a consensus on a theoretical framework that could be used in implementation research. The objectives were to identify an agreed set of key theoretical constructs for use in (1) studying the implementation of evidence based practice and (2) developing strategies for effective implementation, and to communicate these constructs to an interdisciplinary audience.

Methods: Six phases of work were conducted to develop a consensus: (1) identifying theoretical constructs; (2) simplifying into construct domains; (3) evaluating the importance of the construct domains; (4) interdisciplinary evaluation; (5) validating the domain list; and (6) piloting interview questions. The contributors were a "psychological theory" group (n = 18), a "health services research" group (n = 13), and a "health psychology" group (n = 30).

Results: Twelve domains were identified to explain behaviour change: (1) knowledge, (2) skills, (3) social/professional role and identity, (4) beliefs about capabilities, (5) beliefs about consequences, (6) motivation and goals, (7) memory, attention and decision processes, (8) environmental context and resources, (9) social influences, (10) emotion regulation, (11) behavioural regulation, and (12) nature of the behaviour.

Conclusions: A set of behaviour change domains agreed by a consensus of experts is available for use in implementation research. Applications of this domain list will enhance understanding of the behaviour change processes inherent in implementation of evidence-based practice and will also test the validity of these proposed domains.

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Theoretical Domains Approach

Determinants of behaviour

- Knowledge
- Skills
- Social/professional role and identity
- Beliefs about capabilities
- Beliefs about consequences
- Motivation and goals
- Memory, attention and decision processes
- Environmental context and resources
- Social influences
- Emotion
- Behavioural regulation

Michie (2005) *Quality and Safety in Health Care*

- *Nature of the behaviours*

Theoretical Domains Approach

Implementation Science



This Provisional PDF corresponds to the article as it appeared upon acceptance. Fully formatted PDF and full text (HTML) versions will be made available soon.

Learning curves, taking instructions, and patient safety: using a theoretical domains framework in an interview study to investigate prescribing errors among trainee doctors

Implementation Science 2012, **7**:86 doi:10.1186/1748-5908-7-86

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Theoretical Domains Framework

French et al. *Implementation Science* 2012, 7:38
<http://www.implementation-science.com/content/7/1/38>



METHODOLOGY

Open Access

Developing theory-informed behaviour change interventions to implement evidence into practice: a systematic approach using the Theoretical Domains Framework

Simon D French^{1,2*}, Sally E Green¹, Denise A O'Connor¹, Joanne E McKenzie¹, Jill J Francis³, Susan Michie⁴, Rachelle Buchbinder^{1,5,6}, Peter Schattner⁶, Neil Spink⁶ and Jeremy M Grimshaw^{7,8}

Abstract

Background: There is little systematic operational guidance about how best to develop complex interventions to reduce the gap between practice and evidence. This article is one in a Series of articles documenting the development and use of the Theoretical Domains Framework (TDF) to advance the science of implementation research.

Methods: The intervention was developed considering three main components: theory, evidence, and practical issues. We used a four-step approach, consisting of guiding questions, to direct the choice of the most appropriate components of an implementation intervention: Who needs to do what, differently? Using a theoretical framework, which barriers and enablers need to be addressed? Which intervention components (behaviour change techniques and mode(s) of delivery) could overcome the modifiable barriers and enhance the enablers? And how can behaviour change be measured and understood?

Results: A complex implementation intervention was designed that aimed to improve acute low back pain management in primary care. We used the TDF to identify the barriers and enablers to the uptake of evidence into practice and to guide the choice of intervention components. These components were then combined into a cohesive intervention. The intervention was delivered via two facilitated interactive small group workshops. We also produced a DVD to distribute to all participants in the intervention group. We chose outcome measures in order to assess the mediating mechanisms of behaviour change.

Conclusions: We have illustrated a four-step systematic method for developing an intervention designed to change clinical practice based on a theoretical framework. The method of development provides a systematic framework that could be used by others developing complex implementation interventions. While this framework should be iteratively adjusted and refined to suit other contexts and settings, we believe that the four-step process should be maintained as the primary framework to guide researchers through a comprehensive intervention development process.

Theoretical Domains Framework

Francis et al. *Implementation Science* 2012, 7:35
<http://www.implementation-science.com/content/7/1/35>



COMMENTARY

Open Access

Theories of behaviour change synthesised into a set of theoretical groupings: introducing a thematic series on the theoretical domains framework

Jill J Francis^{1*}, Denise O'Connor² and Janet Curran³

Abstract

Behaviour change is key to increasing the uptake of evidence into healthcare practice. Designing behaviour-change interventions first requires problem analysis, ideally informed by theory. Yet the large number of partly overlapping theories of behaviour makes it difficult to select the most appropriate theory. The need for an overarching theoretical framework of behaviour change was addressed in research in which 128 explanatory constructs from 33 theories of behaviour were identified and grouped. The resulting Theoretical Domains Framework (TDF) appears to be a helpful basis for investigating implementation problems. Research groups in several countries have conducted TDF-based studies. It seems timely to bring together the experience of these teams in a thematic series to demonstrate further applications and to report key developments. This overview article describes the TDF, provides a brief critique of the framework, and introduces this thematic series.

In a brief review to assess the extent of TDF-based research, we identified 133 papers that cite the framework. Of these, 17 used the TDF as the basis for empirical studies to explore health professionals' behaviour. The identified papers provide evidence of the impact of the TDF on implementation research. Two major strengths of the framework are its theoretical coverage and its capacity to elicit beliefs that could signify key mediators of behaviour change. The TDF provides a useful conceptual basis for assessing implementation problems, designing interventions to enhance healthcare practice, and understanding behaviour-change processes. We discuss limitations and research challenges and introduce papers in this series.



Summary

- Consistent evidence of failure to translate research findings into clinical practice
- Behavioural perspective may be helpful to inform barrier assessment and intervention choice
- Theoretical domains framework is innovative and accessible way to use behavioural approach to inform knowledge translation activities

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