INTRODUCTION

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AIMS

- To familiarize with the recommendations for designing, implementing, and evaluating physical activity programmes for diverse populations.

BEHAVIOUR CHANGE TECHNIQUES

Introduction

Question:
If you want to build an intervention (evidence and theory based) to change a behaviour, where you will start?
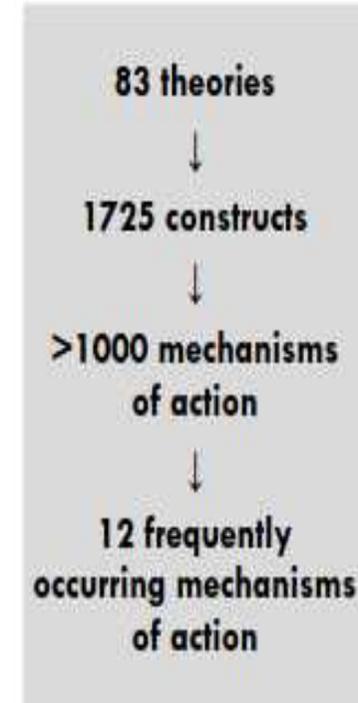
TERMS ...

- Theory
- Model
- Behaviour
- Physical activity behaviour
- Theory of Planned Behaviour
- Social Cognitive Behaviour Theory

BEHAVIORAL INTERVENTIONS

More than **200** Behaviour Change Experts from **16** **countries** expressed interest in participating in our Expert Consensus Study

83 theories
↓
1725 constructs
↓
>1000 mechanisms of action
↓
12 frequently occurring mechanisms of action

- http://www.ucl.ac.uk/behaviour-change-techniques

BEHAVIOUR CHANGE WHEEL

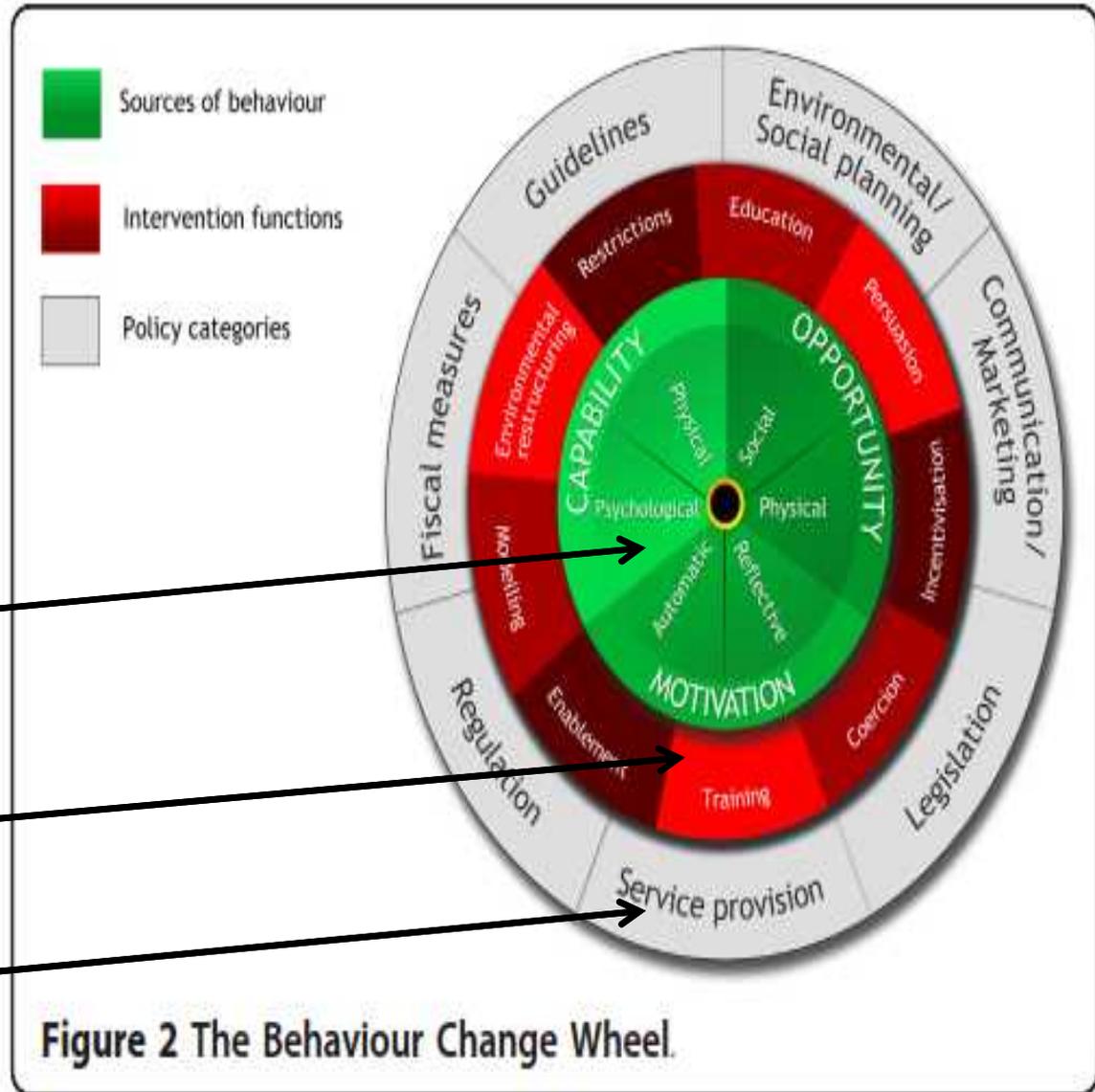The Behaviour Change Wheel: a system for designing effective interventions.

Susan Michie Professor of Health Psychology, University College London

Behaviour emerges from interactions between three necessary conditions ...

Sources of behaviours

Interventions functions

Policy categories

Figure 2 The Behaviour Change Wheel.

FOCUS ON BEHAVIOUR CHANGE TECHNIQUES

To replicate and implement behaviour change interventions in research and practice, **we need an agreed language to report their content**, that is, their 'active ingredients'.

BCT="Active ingredients" within the intervention designed to change behaviour.

They are **observable**, **replicable** and **irreducible** components of an intervention. Can be used alone or in combination with other BCTs.

THE BENEFITS OF THE BCT APPROACH

1. Developing BC interventions

2. Reporting interventions

3. Implementing effective interventions in practice

4. Replicating interventions and control conditions

5. Synthesizing evidence

6. Linking to theory:

7. Accumulating scientific knowledge about behaviour change

WHAT TO DO...

1. Start with the target behaviour

- Precise description
- Understanding of its determinants

2. Consider full range of possible interventions and policies

3. Identify specific behaviour change techniques

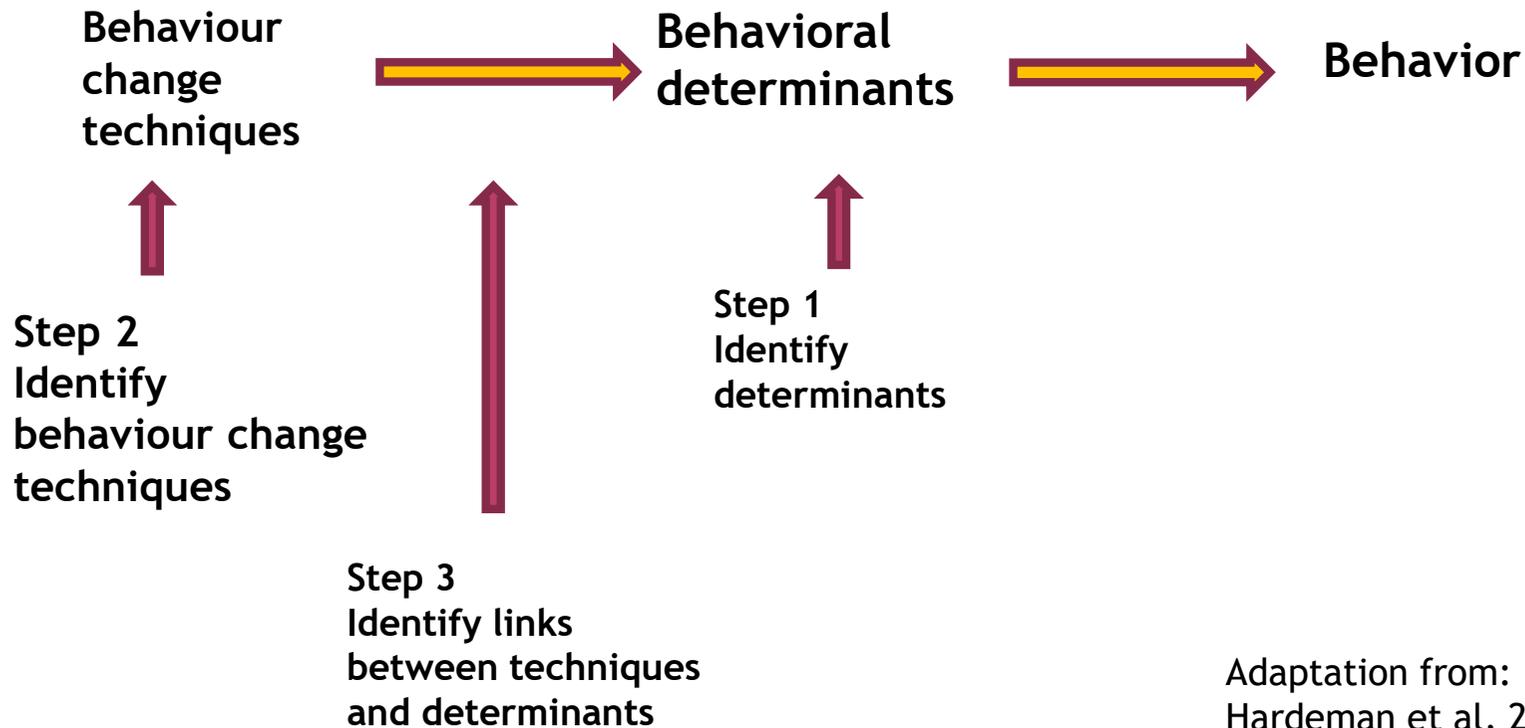4. Design communication strategy to support the above

Effective communication requires ...

- An analysis of the target behaviour

  – Who needs to do what, when and how

  – understanding as to why desired behaviour is not occurring

- A method for selecting types of intervention and specific behaviour change techniques

- Modes of delivery of behaviour change techniques

  – Media, messages, images, source

HOW WE BUILD THEORY AND EVIDENCE BASED INTERVENTIONS

Interventions= Activities designed to change behaviours

Behaviour change techniques → **Behavioral determinants** → **Behavior**

Step 2 Identify behaviour change techniques

Step 1 Identify determinants

Step 3 Identify links between techniques and determinants

Adaptation from: Hardeman et al, 2005

MODELS - THEORIES

A model is:	A theory is:

...a representation of a system consisting of constructs and relationships between these.

Or.....a simplified simulation of reality

Models are used to:

- describe relevant characteristics of the system
- make predictions
- develop interventions

How do we know if a model is a good one?

- When it makes, and continues to make, testable, accurate predictions

...a model that purports to explain a set of phenomena

Theories are used to:

- understand the phenomena
- guide observation
- develop interventions

How do we know if a theory is a good one?

- When it is concise, coherent, systematic, predictive, and broadly applicable
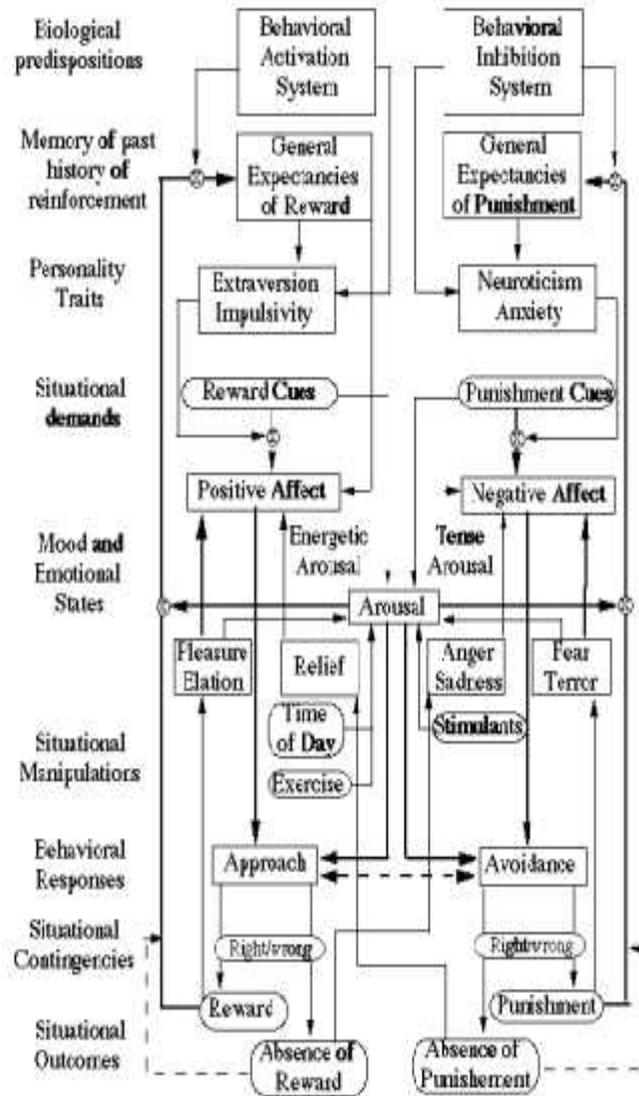
Source:

UCL Centre for Behaviour Change

3 GROUPS OF BEHAVIOUR CHANGE THEORIES:

- Motivational: explain behaviour of people who have not yet established intention
  - e.g. Theory of Planned Behaviour, Operant Learning Theory

- Action: explain behaviour of people who have identified a need to change
  - e.g. Control Theory/Self-regulation Theory

- Organisational: explain 'institution' level change
  - e.g. Diffusion of Innovation

Behavioural models can get quite complex...

Source:

MOREOVER... CONSTRUCTS AND BEHAVIOR CHANGE TECHNIQUES OVERLAP BETWEEN THEORETICAL FRAMEWORKS

- **Prompt intention formation. (TRA, TPB, SCogT)**
  - Encouraging the person to decide to act or set a general goal, for example, to make a behavioral resolution such as "I will take more exercise next week'
- **Provide information on consequences. (TRA, TPB, SCogT)**
  - Information about the benefits and costs of action or inaction, focusing on what will happen if the person does or does not perform the behavior

Abraham & Michie 2008

BEHAVIOUR CHANGE INTERVENTIONS' CAN BE DEFINED AS COORDINATED SETS OF ACTIVITIES DESIGNED TO CHANGE SPECIFIED BEHAVIOUR PATTERNS.

- Evidence of intervention effectiveness serves **to guide health / education providers to implement what is considered to be best practice** (e.g., Cochrane reviews, NICE guidance).

- While there are many examples of **successful interventions**, there are also countless examples of ones that it was hoped would be effective but were not.

- There is no consensus on terminology, and descriptions of interventions lack the specificity required for replication.

- To improve this situation, and **to improve the translation of research into practice**, we need to **develop the science and technology of behaviour change and make this useful to those designing interventions and planning policy**.

- A well-developed system of defining and labelling BCTs would allow the science of behaviour change to accumulate evidence and **advance theory of behaviour change.**

TO ENHANCE SCIENTIFIC STANDARDS IN THIS AREA:

There are three main areas in which **conceptual** and **methodological** advances are urgently needed

- (1) clarity about 'behaviour' as an outcome,

- (2) replicable methods for reporting the 'active ingredients', that is behavior change techniques (BCTs) and

- (3) linking behavioral interventions and BCTs to theoretical mechanisms of change.

WHY WE NEED A TAXONOMY

- interventions to change behavior are <u>essential in prevention</u>
- Their effectiveness is variable, and we do not have a full understanding of <u>what accounts for this variability</u>.
- <u>Evidence about effectiveness,</u> sources of variation and mechanisms of action are <u>accumulating slowly</u>.
- <u>Ineffective</u> techniques continue to be used, while <u>effective</u> techniques are underused, difficult to replicate and their mechanisms of action are poorly understood

EXAMPLES OF BCT

Behaviour change techniques: reliable taxonomy
to change physical activity and healthy

1. General information
2. Information on conseque
3. Information about appr
4. Prompt intention form
5. Specific goal setting
6. Graded tasks
7. Barrier identification
8. Behavioral contract
9. Review goals
10. Provide instruction
11. Model/ demonstrate
12. Prompt practice
13. Prompt monitoring
14. Provide feedback

Involves detailed planning of what the person will do including, at least, a very specific definition of the behaviour e.g., frequency (such as how many times a day/week), intensity (e.g., speed) or duration (e.g., for how long for). In addition, at least one of the following contexts i.e., where, when, how or with whom must be specified. This could include identification of sub-goals or preparatory behaviours and/or specific contexts in which the behaviour will be performed.

19. Social comparison
20. Social support/ change
21. Role model
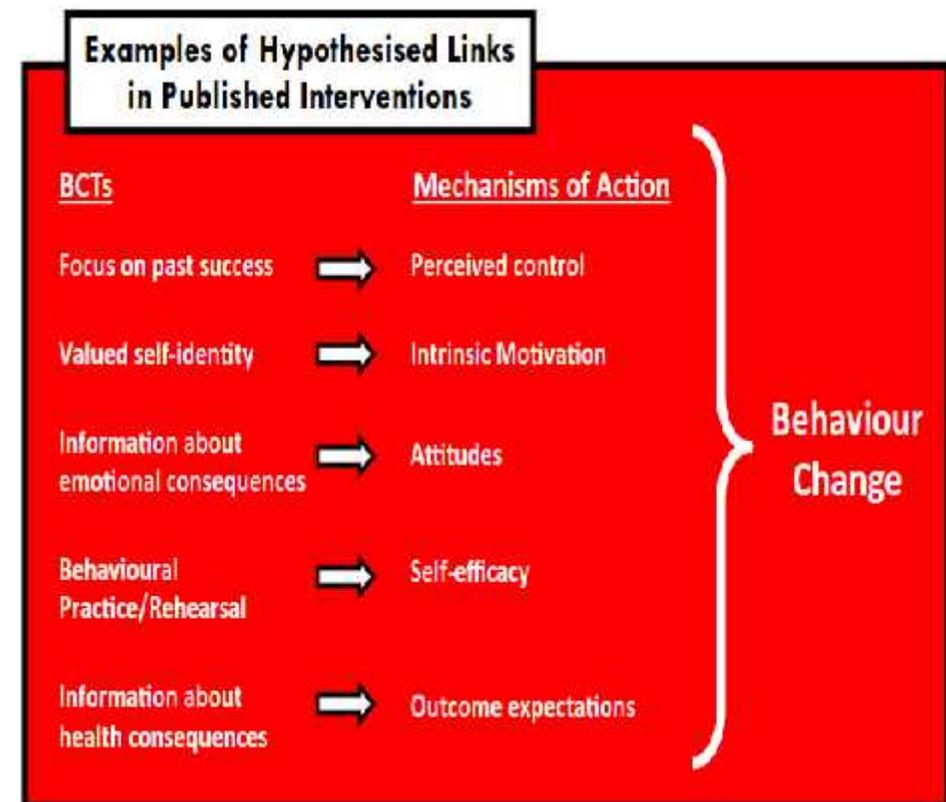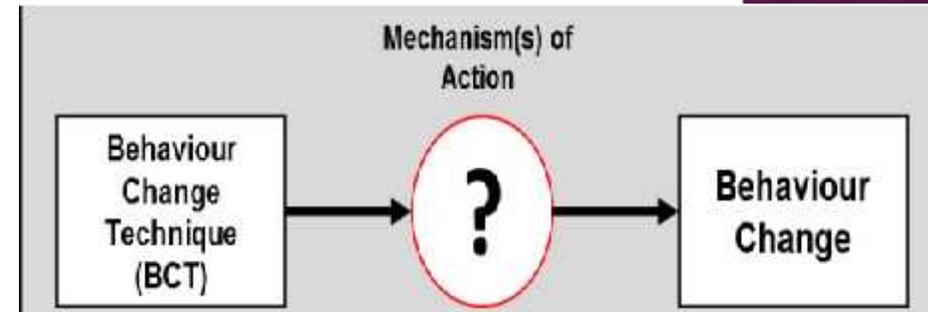22. Prompt self talk
23. Relapse prevention

The person is asked to keep a record of specified behaviour/s. This could e.g. take the form of a diary or completing a questionnaire about their behaviour.

Abraham & Michie (2008). A taxonomy of behavior change techniques used in interventions. *Health Psychology*.

ONLINE DATABASE WHERE YOU CAN SEARCH FOR, AND ADD, PAPERS USING BCTTV1

- They collect data from published reports of behaviour change interventions.

- They try to illustrate the 'strength' of BCT-mechanism links, as hypothesized by authors of published interventions

https://www.ucl.ac.uk/behaviour-change-techniques/Resources/BCTTv1Publications

⦿ Thank you