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Using the TDF to Assess Barriers

Jill Francis, PhD, C.Psychol.
School of Health Sciences
City University London

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Three Issues

- Terms, Concepts and Levels
- Rationale
- **Methods**

Terms

- What is a **barrier**?
 - ‘something material that blocks or is intended to block’
 - ‘something immaterial that impedes or separates’(Merriam-Webster Dictionary)



Terms

- What is a **barrier**?
- Generalised or tailored barriers?
- Reported or identified barriers?
- What about facilitators / enablers / levers?
- Predictors
- Determinants
- Causes
- Theoretical determinants
- Key factors
- Key domains
- Important beliefs



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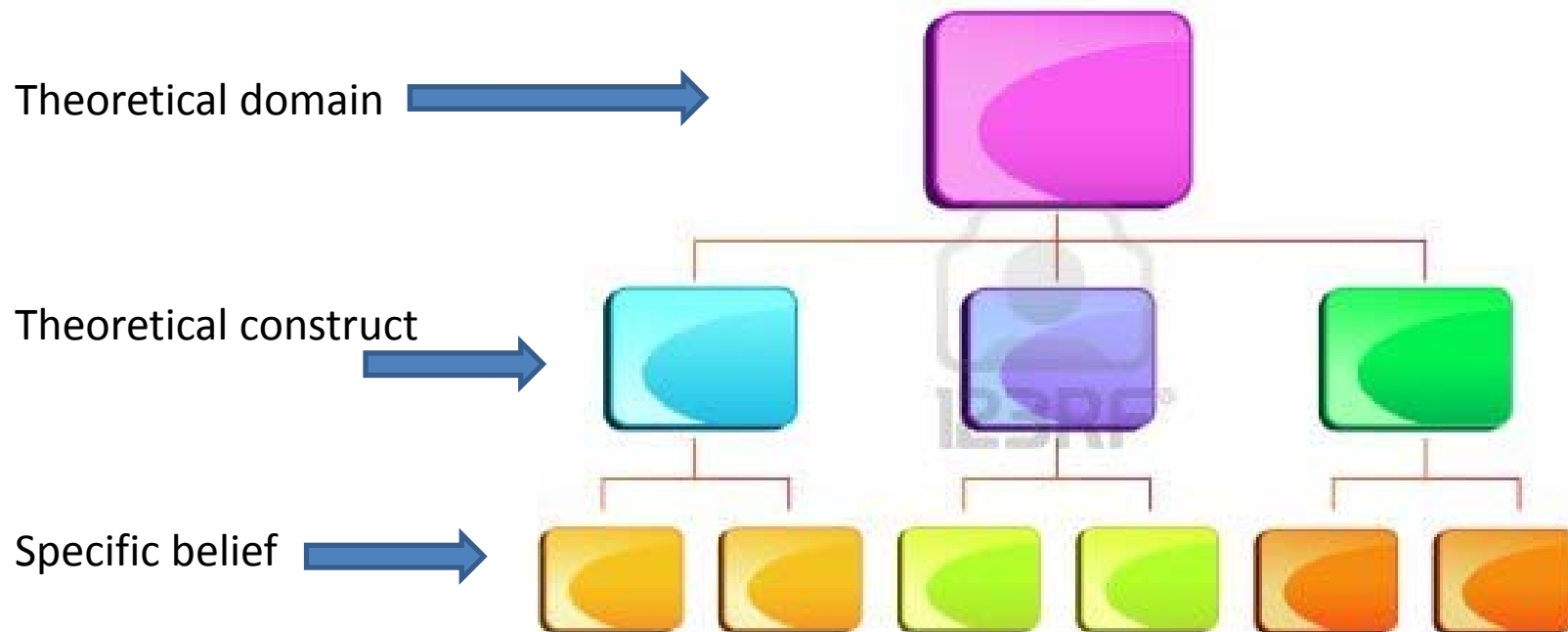


Rationale

- Why assess barriers?

Rationale

- Why assess barriers?
- Designing interventions that address barriers
- Selecting appropriate **level** of barriers / facilitators
- Relationship of barriers to evidence about behaviour change

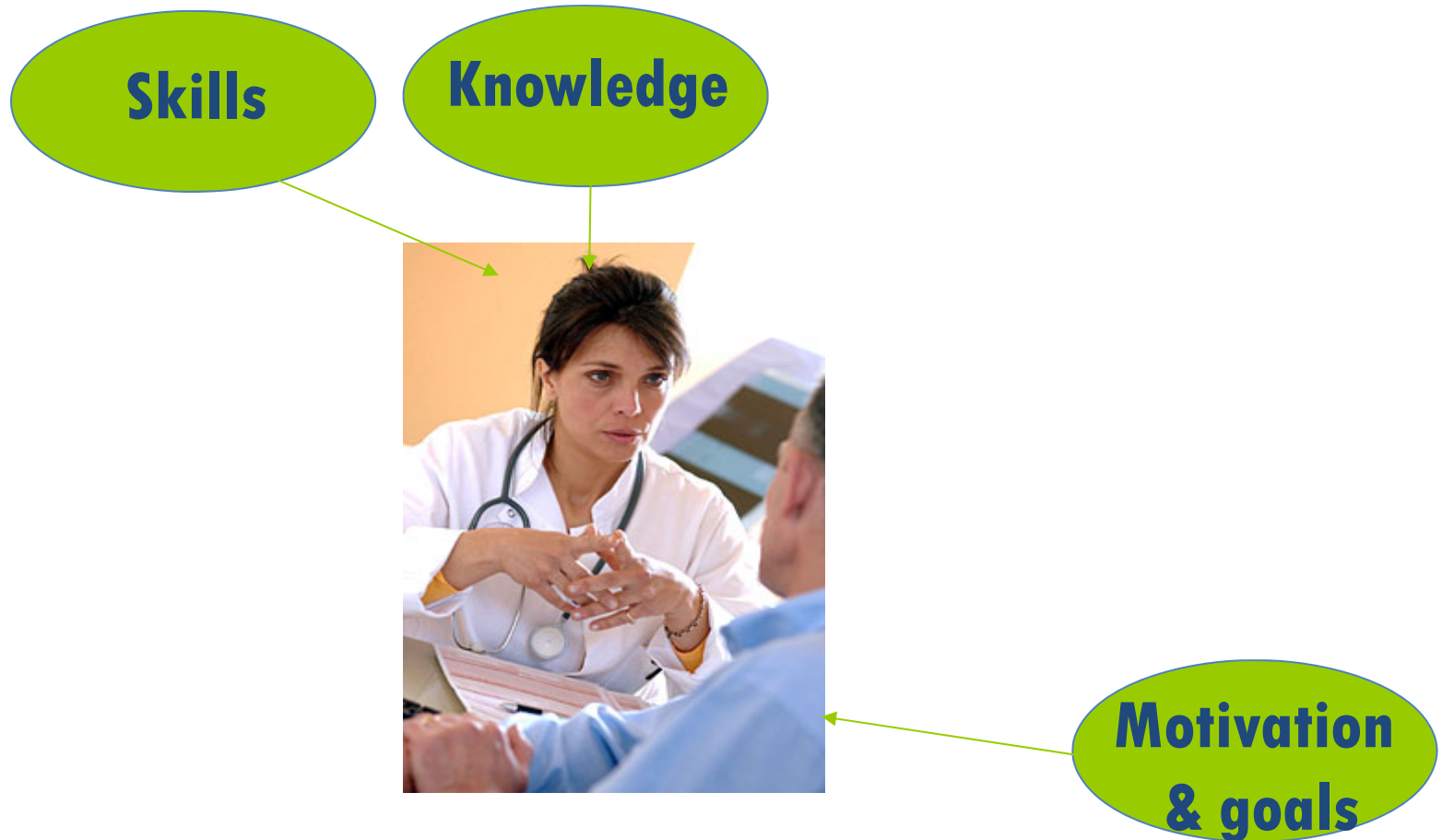


THEORETICAL DOMAINS FRAMEWORK (TDF)



Michie et al. Making psychological theory useful for implementing evidence based practice. *Qual & Safety in Health Care* 2005; 14:26–33.

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128 constructs from 33 theories of behaviour/organisation

Methods: 6 steps

1. Study design
2. Sample
3. Materials
4. Data collection
5. Data analysis
6. Interpretation



Study design

- Semi-structured one-to-one interview
- Focus group interview
- Predictive Questionnaire

Sample

- 'Actors' – Individuals performing the behaviour
- Managers?
- Other members of clinical team?
- Dyads? (clinician/patient; parent/child)

Materials

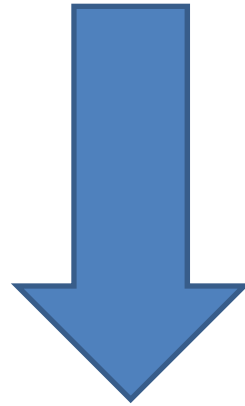
- Topic guides
 - Open questions to elicit specific beliefs
 - Further probes to clarify domain-relevant content
- Questionnaires
 - open format
 - closed format
- (Pilot testing)

Data collection

- Qualitative:
 - Interviewer competencies
- Quantitative:
 - Pre-validation methods (eg interview study)
 - Validity
 - Reliability
 - Psychometric properties

Data analysis

- Interview data: two stages
 - Code using pre-existing framework (TDF)
 - Analyse for emergent themes within each domain
- Questionnaire data:
 - Descriptive stats
 - Correlation
 - Multiple regression?



IDENTIFICATION OF IMPORTANT BARRIERS

Interpretation

- **Methods to identify barriers that are:**
 - ‘Important’; ‘Relevant’; ‘Key’
 - **Appropriate intervention targets**

Francis JJ, Stockton, Eccles, Johnston, Cuthbertson, Grimshaw et al. Evidence-based selection of theories for designing behaviour change interventions: Using methods based on theoretical construct domains to understand clinicians' blood transfusion behaviour. *British Journal of Health Psychology* 2009; 14,:625–46.

Study comparing methods for assessing importance of BELIEFS

All beliefs were Beliefs about Consequences

1. Importance **ratings** (questionnaire; 1-9 scale)
2. **Frequency** (in interviews) of 14 beliefs
3. **Correlation** of agreement scores (1-9) with global attitude score (1-9)
4. Multivariate **prediction** (β) from agreement scores to global attitude score

Francis JJ, Duncan EM, MacLennan G et al. Do elicitation studies really identify important beliefs? A test of the cognitive accessibility assumption in a multinational Delphi study set in critical care. Annual conference of the BPS *Division of Health Psychology*, Liverpool, Sept 2012

Correlations (p-values) between four indices of importance

	1. Importance ratings	2. Frequency of elicitation	3. Correlation	4. Beta weight
1	-			
2	X (x)	-		
3	X (x)	X (x)	-	
4	X (x)	X (x)	X (x)	-

N = 14 beliefs

Correlations (p-values) between four indices of importance

	1. Importance ratings	2. Frequency of elicitation	3. Correlation	4. Beta weight
1	-			
2	0.58 (0.029)	-		
3	0.69 (0.006)	0.53 (0.051)	-	
4	-0.08 (0.781)	0.16 (0.576)	0.35 (0.226)	-

N = 14 beliefs



Study to identify important DOMAINS: Interview data

Interview Question

How might the views of other team members affect whether you *manage a patient with borderline Hb by watching & waiting instead of transfusing RBCs?*

Responses

...decisions are made in conjunction with other members of the team... (ICU3, 259)

...input is welcome for referring specialities but nothing is sanctioned until the ITU team agree it...(ICU12, 377)

Domain

Social Influences



INTOPT interview data

Interview Question

What are the benefits or disadvantages of *managing a patient with borderline Hb by watching & waiting instead of transfusing RBCs?*

Responses

...you avoid the hazards of transfusion... (ICU5, 516)
...we cannot be completely certain that this [watching & waiting] isn't going to be harmful to the patient... (ICU4, 608)

Domain

Beliefs About Consequences



INTOPT Interview data

Interview Question

Would you feel worried about *managing a patient with borderline Hb by watching & waiting instead of transfusing RBCs?*

Responses

I wouldn't be unduly worried about this particular decision. (ICU4, 741)
Not at all. (ICU8, 536)

Domain

Emotion

Summary: Identifying 'Barriers'

- Collect data at level of **beliefs**
- Identify barriers at level of **domains**
- Use robust methods to identify domains that are:
 - 'Important'; 'Relevant'; 'Key'
 - Appropriate intervention targets
- For further consideration:
 - Qualitative or quantitative evidence?
 - Prioritising domains?

Thank you for listening
Jill.Francis.1@city.ac.uk



CITY UNIVERSITY
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EST 1894

