Thinking through implementation with Normalization Process Theory

Carl May
KEEP CALM AND THINK ABOUT THEORY
Implementation Science

“the scientific study of methods to promote the systematic uptake of research findings and other evidence-based practices into routine practice, and, hence, to improve the quality and effectiveness of health services”

Eccles, M. and Mittman, B., 2006, Implement Sci
Implementation is the translation of strategic intentions into everyday practices?

Implementation, context and complexity

Carl R. May1,2,3, Mark Johnson3,4 and Tracy Finch3

Implementation Science

Abstract
Background: Context is a problem in research on health behaviour change, key implementation and health improvement. This is because many interventions and contextual confounders, when these represent the normal conditions in which implementation is integrated if they are to be workable in practice.

Implementation: We present an analytical model of the ways that context interacts with implementation. The contextual, structural, and personal components of implementation are shown to be the key factors in determining the success or failure of an intervention. The model is applied to the case of a community-based intervention to improve smoking cessation.

Implementing, Embedding, and Integrating Practices: An Outline of Normalization Process Theory

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http://www.implementationscience.com/content/18/1/78

DEBATE Open Access
Towards a general theory of implementation
Carl May

Agency and implementation: Understanding the embedding of healthcare innovations in practice
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Abstract
Understanding and evaluating the implementation of healthcare innovations in practice is a complex process. It involves the interaction of multiple factors, including the characteristics of the innovation, the context in which it is implemented, and the methods used to evaluate its effectiveness.

A rational model for assessing and evaluating complex interventions in health care
Carl May

Normalisation process theory: a framework for developing, evaluating and implementing complex interventions
Elizabeth Murray1, Shaun Treweek1, Catherine Pope1, Anne MacFarlane1, Luciana Ballini2, Christopher Dowrick3, Tracy Finch3, Anne Kennedy3, Frances May4, Catherine O'Donnell5, Bir Nio Ong6, Tim Rayle1, Anne Rogers1, Carl May1

BMC Health Services Research

Research article
A rational model for assessing and evaluating complex interventions in health care
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An innovation is almost never a thing-in-itself. To be seen, there is often what looks like a thing — a newly invented or modified way of thinking or acting, or an artifact, or a system — that is identified in everyday talk as something new. In healthcare, as in almost every other area of human organization,
Normalization Process Theory

It’s all about the work

‘the work that actors do as they engage with some ensemble of activities (that may include new or changed ways of thinking, acting, and organizing) and by which means it becomes routinely embedded in the matrices of already existing, socially patterned, knowledge and practices’

More than 400 protocols, empirical reports and systematic reviews now report aspects of NPT.

- **Theory development**
  - Observational studies
    - Uncontrolled feasibility and process evaluation studies (e.g. Frankx 2012)
    - Field dynamics studies (e.g. Erhlich 2015)
    - Patient Experience Studies (e.g. Gallacher et al 2012)
  - Prospective intervention studies
    - Controlled feasibility and process evaluation studies (e.g. Furler et al 2017)
    - Prospective cohort interventions (e.g. Johnson et al, 2017)
  - Systematic reviews
    - Explanatory systematic reviews (e.g. Mair et al, 2012)
    - Summative systematic reviews (e.g. MacFarlane et al, 2017)
  - Instrument development
    - Toolkits for service redesign and development (e.g. May et al, 2010)
    - NoMAD Instrument (e.g. Finch et al, 2015)
What is the work people do when they implement a new technique, technology or organisational intervention?

AT THE IMPLEMENTATION CORE...
To understand real world implementation processes we need to analyse **collective action and collaborative work** – what people *do, together.*

**Implementation** (the work of enacting intervention components in ‘real life’ settings)

**Embedding** (intervention components are routinely incorporated in everyday practice)

**Integration** (the work of sustaining intervention components in everyday practice)
### What is being implemented?

<table>
<thead>
<tr>
<th>Intervention components:</th>
<th>Interaction strategies:</th>
</tr>
</thead>
<tbody>
<tr>
<td>ensembles of behaviours and practices formed around <strong>objects, material practices, and procedures.</strong></td>
<td>Changed interactions and relationships between participants, and their assumed capabilities</td>
</tr>
<tr>
<td><strong>Rules and resources:</strong> Changed norms and roles, informational and material resources shape practice and participants’ delegated accountabilities</td>
<td><strong>Organizing logics:</strong> Patterns of agreements and values that give cognitive authority to participants and meaning to their actions</td>
</tr>
</tbody>
</table>
The implementation core: collaborative work and collective action

<table>
<thead>
<tr>
<th>Coherence: work that makes sense of the components of a complex intervention</th>
<th>Collective Action: work that defines and enacts a complex intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive Participation: work that includes people in a complex intervention</td>
<td>Reflexive Monitoring: work that evaluates the effects of a complex intervention</td>
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</table>

The implementation core....

- COHESION
- COGNITIVE PARTICIPATION
- COLLECTIVE ACTION
- REFLEXIVE MONITORING

Organizing Structures and Social Norms

ORGANIZING COMPONENTS (Skill set workability & Contextual Integration)

IMMEDIATE COMPONENTS (Interaction work & Relational Integration)

Group Processes and Conventions
Effective implementation interventions depend on action.

<table>
<thead>
<tr>
<th>Increasing intervention effectiveness</th>
<th>Patient-mediated interventions</th>
<th>Audit and feedback</th>
<th>Educational outreach visits</th>
<th>Reminders</th>
<th>Educational meetings</th>
<th>Distribution of educational materials</th>
<th>Marketing</th>
<th>Local consensus processes</th>
<th>Mass media</th>
<th>Local opinion leaders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spread of NPT constructs within intervention</td>
<td>Coherence</td>
<td>Cognitive participation</td>
<td>Collective action</td>
<td>Reflexive monitoring</td>
<td></td>
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<tr>
<td>Individual specification</td>
<td>Communical specification</td>
<td>Internalization</td>
<td>Initiation</td>
<td>Legitimization</td>
<td>Enrolment</td>
<td>Activation</td>
<td>Interactional workability</td>
<td>Relational integration</td>
<td>Contextual integration</td>
<td>Social acceptability</td>
</tr>
</tbody>
</table>

Conclusion

• NPT appears to accurately depict important elements of implementation processes and the constructs of the theory can be applied in a stable and consistent way within and between studies.
• NPT has provided conceptual tools for feasibility studies and process evaluations of complex healthcare interventions. It has successfully explained the outcome of such intervention studies.
• NPT can be applied flexibly, and can be understood and mobilised by researchers and practitioners with diverse professional backgrounds, working across a variety of healthcare settings.
Thank you!

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