Multi-level resilience: challenges in understanding resilience at the macro level

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Multi-level resilience

- Most resilience studies focus on frontline work
- Increasing recognition of the importance of taking a multi-level perspective
- Recent definition of resilient healthcare explicitly includes different system levels

"… the capacity to adapt to challenges and changes at different system levels, to maintain high quality care."

DEBATE Open Access

Defining the boundaries and operational concepts of resilience in the resilience in healthcare research program

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Abstract

Background: Understanding the resilience of healthcare is critically important. A resilient healthcare system might be expected to consistently deliver high quality care, withstand disruptive events and continually adapt, learn and improve. However, there are many different theories, models and definitions of resilience and most are contested and debated in the literature. Clear and unambiguous conceptual definitions are important for both theoretical and practical considerations of any phenomenon, and resilience is no exception. A large international research programme on Resilience in Healthcare (RiH) is seeking to address these issues in a 5-year study across Norway, England, the Netherlands, Australia, Japan, and Switzerland (2018–2023). The aims of this debate paper are: 1) to identify and select core operational concepts of resilience from the literature in order to consider their contributions, implications, and boundaries for researching resilience in healthcare; and 2) to propose a working definition of healthcare resilience that underpins the international RiH research programme.

Main text: To fulfil these aims, first an overview of three core perspectives or metaphors that underpin theories of resilience are introduced from ecology, engineering and psychology. Second, we present a brief overview of key definitions and approaches to resilience applicable in healthcare. We position our research program with collaborative learning and user involvement as vital prerequisite pillars in our conceptualisation and operationalisation of resilience for maintaining quality of healthcare services. Third, our analysis addresses four core

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Why study the macro level?

- Regulation can in theory support safe adaptation within a regulatory framework
- Need to balance regulation and flexibility
- But determining how to achieve this is not clear.
- We need to study resilience at all levels of the system to understand overall system resilience

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Why study the macro level?

- Creates the context within which provider organisations must function
- Meso level activities also shape the macro level
  - Feedback, influence, consultation, membership of macrolevel bodies
- Understanding such interactions is vital for understanding overall system resilience.

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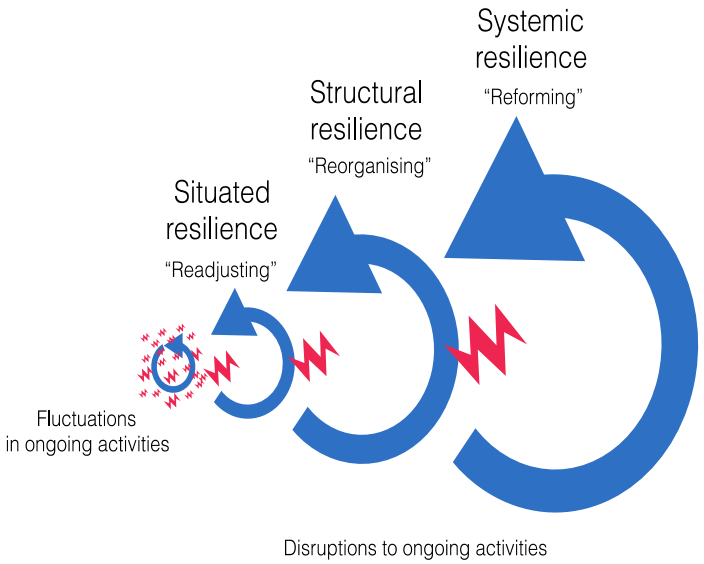
Challenge 1. Definitions

Different conceptualisations

- macro – the system level
- meso – the organisational level
- micro – the clinical team level



Resilience at different temporal and spatial scales (Macrae & Wiig, 2019, p. 126)

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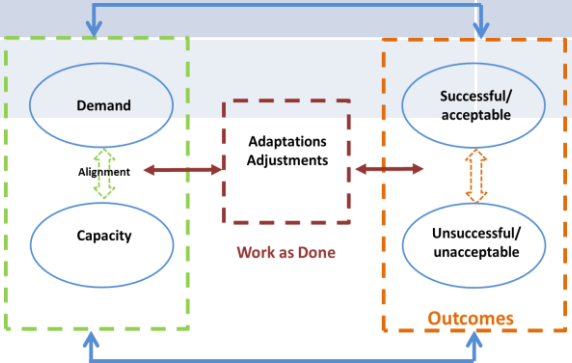
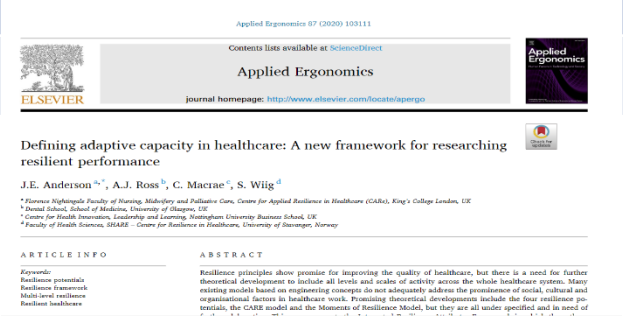
Challenge 2. Conceptual

Integrated Resilience Attributes Framework

Resilience potentials	Situated resilience - Re-adjusting processes by integrating and applying existing resources and practices	Structural resilience - Re-organising and restructuring sociotechnical resources and practices	Systemic resilience – Reforming and reconfiguring how resources and practices are produced
Anticipating			
Monitoring			
Responding			
Learning			

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Defining adaptive capacity in healthcare: A new framework for researching resilient performance

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ABSTRACT

Resilience principles show promise for improving the quality of healthcare, but there is a need for further theoretical development to include all levels and scales of activity across the whole healthcare system. Many existing models based on engineering concepts do not adequately address the prominence of social, cultural and organisational factors in healthcare work. Promising theoretical developments include the four resilience potentials, the CARE model and the Moments of Resilience Model, but they are all under specified and in need of

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Challenge 3. Mapping the macro level

- The macro level is complex and multi layered - many bodies with overlapping and sometimes competing goals
  - In 2019 there were 126 organisations with regulatory oversight in the UK carrying out 15 different regulatory functions

- Many studies, do not map the macro context in detail, precluding analyses of
  - the interaction between macro level organisations,
  - and between the macro and meso/micro levels of the system

Eirini Oikonomou et al. BMJ Open 2019;9:e028663

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Challenge 4. Data sources

- What data are relevant for multi level analysis?
- Regulatory regimes
  - Multiple regimes may exist
  - Often they are not specified, unarticulated
  - No overall integrated approach

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Data sources

http://ijhpm.com
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Original Article

Government Actions and Their Relation to Resilience in Healthcare During the COVID-19 Pandemic in New South Wales, Australia and Ontario, Canada

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Abstract

Background: Resilience, a system's ability to maintain a desired level of performance when circumstances disturb its functioning, is an increasingly important concept in healthcare. However, empirical investigations of resilience in healthcare (RiH) remain uncommon, particularly those that examine how government actions contribute to the capacity for resilient performance in the healthcare setting. We sought to investigate how governmental actions during the coronavirus disease 2019 (COVID-19) pandemic related to the concept of resilience, how these actions contributed to the potential for resilient perform

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Challenge 5. Mechanisms

- How do macro level actors influence resilience at meso and micro levels?
- Is it possible to identify mechanisms given
  - Multiple influences
  - Temporal and spatial scales
  - Reciprocal interaction

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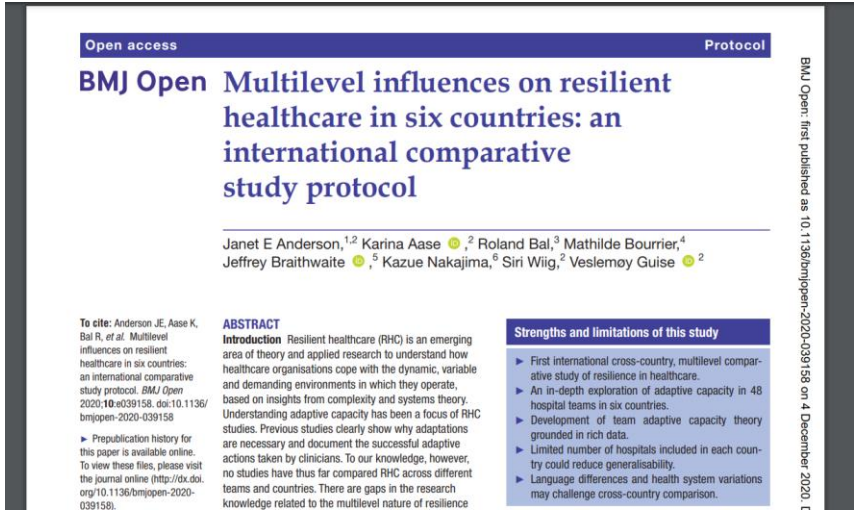
International comparative study

- Five countries
  - Norway – SHARE centre
  - Australia
  - UK
  - Japan
  - Netherlands
- Focused on team adaptive capacity but taking into account how this is shaped by other system levels



Open access Protocol

BMJ Open

Multilevel influences on resilient healthcare in six countries: an international comparative study protocol

Janet E Anderson,[1,2] Karina Aase,[2] Roland Bal,[3] Mathilde Bourrier,[4] Jeffrey Braithwaite,[5] Kazue Nakajima,[6] Siri Wiig,[2] Veslemøy Guise[2]

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ABSTRACT

Introduction Resilient healthcare (RHC) is an emerging area of theory and applied research to understand how healthcare organisations cope with the dynamic, variable and demanding environments in which they operate, based on insights from complexity and systems theory. Understanding adaptive capacity has been a focus of RHC studies. Previous studies clearly show why adaptations are necessary and document the successful adaptive actions taken by clinicians. To our knowledge, however, no studies have thus far compared RHC across different teams and countries. There are gaps in the research knowledge related to the multilevel nature of resilience

Strengths and limitations of this study

- ► First international cross-country, multilevel comparative study of resilience in healthcare.
- ► An in-depth exploration of adaptive capacity in 48 hospital teams in six countries.
- ► Development of team adaptive capacity theory grounded in rich data.
- ► Limited number of hospitals included in each country could reduce generalisability.
- ► Language differences and health system variations may challenge cross-country comparison.

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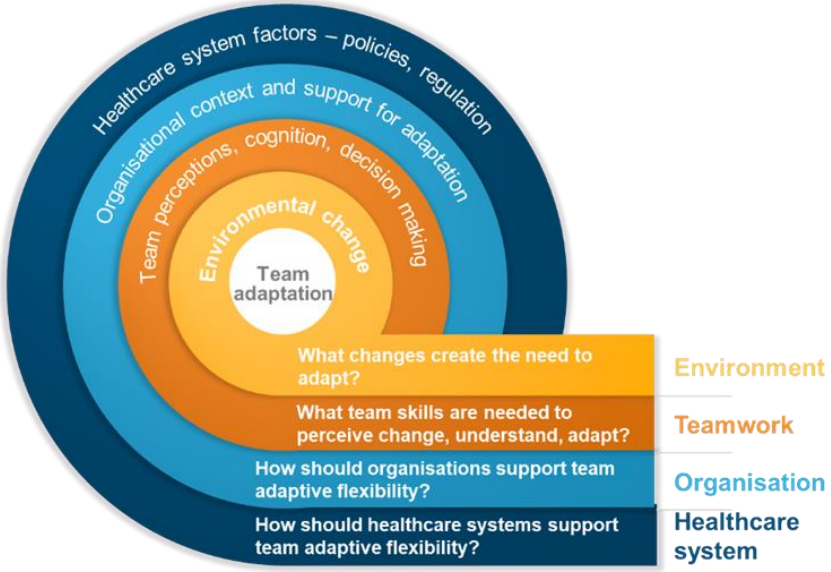
Design and aims

- Understand how resilience is enabled or inhibited in each team
  - Teamwork behaviour
  - Organisational factors
  - Healthcare system factors
- Macro level analysis of the healthcare systems
- Comparative cross case analysis
- Develop guidance for designing resilient teams in different contexts



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Macro level analysis

- Establishes the broad landscape in each country
- Detail difficult to grasp
- Link to resilience is not clear
- Can countries be characterised by analysing the macro level?
- Do we need additional data?

- Structure of h/c system
- Funding and access
- Patient rights
- Regulatory framework
- Accreditation and monitoring,
- Information availability,
- Resources available for quality

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Conclusions

- Conceptual clarity –
  - What do we mean by system levels?
  - How is the idea of levels conceptually linked to resilience?
- Methodological guidance for studying the complex interactions and mechanisms between different levels of a system
- Data sources and availability

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