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LETTER TO THE EDITOR

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Nuancing the continuum from ideal to real-world implementation: a letter to the editor on Nilsen et al.

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Abstract

Nilsen et al.'s (Implement Sci Commun 6:90, 2025) proposal to distinguish between implementation efficacy and effectiveness, and to situate implementation studies along a continuum from ideal to real-world conditions, offers a valuable conceptual advance. In this commentary, we acknowledge the contribution of their debate while highlighting potential limitations of applying a single-axis continuum to a field heavily characterized by contextual complexity. Drawing from decades of healthcare quality improvement, we argue that implementation interventions often blend efficacy-like and effectiveness-like elements, making neat classification difficult. We further suggest that oversimplification risks obscuring the realities of organizational change. Instead, we propose a double-axis model that considers both the implementation intervention and the context in which it unfolds. Economic evaluation likewise requires nuanced approaches that go beyond their proposed continuum indicator tool ("Implementation PRECIS"). To constructively extend Nilsen et al.'s contribution, we advocate for integration of the tool with existing approaches to evaluation, co-production with stakeholders, and empirical validation across diverse settings. While no implementation endeavor is ideal, advancing discourse around how efficacy and effectiveness are conceptualized can support more pragmatic, context-responsive, and sustainable improvements in healthcare.

Keywords Commentary, Evidence, Facilitation, Healthcare, Implementation intervention

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Main text

Introduction: extending the implementation efficacy-effectiveness debate

To advance the understanding of whether and how implementation interventions work, and are appropriate to scale up, Nilsen et al. suggest a further distinction with regards to efficacy and effectiveness [1]. Addressing the model by Curran et al. [2, 3] which (in short) proposes a route to recognise (and distinguish between) the clinical intervention being implemented, and the implementation intervention(s) to facilitate uptake, Nilsen et al. propose that the efficacy and effectiveness of implementation intervention(s) can and should be considered. In doing so, Nilsen et al. suggest a continuum from ideal to real-world interventions, along with a continuum indicator tool ("Implementation PRECIS") to determine where the implementation intervention sits. In addition, Nilsen et al. call for further health economic evaluation of implementation strategies and outcomes.

Though we recognise the need to progress, we comment on some aspects of the debate, departing from decades of promoting and investigating 'change', and healthcare's struggle to keep up with what is beneficial [4].

Implementation in practice: the struggle for real-world change

Quality improvement initiatives, including implementation interventions, have yielded mixed experiences and results [5–8]. Though some endeavors succeed, many efforts fail. We agree that studying change needs to move beyond what provides what outcomes, to include also what interventions promote the integration of evidence into practice [9]. Effect and efficiency are important aspects, requiring both prospective and retrospective perspectives. Distinguishing between efficacy and effectiveness provides conceptual clarity and promises to temper overly optimistic assumptions about real-world uptake. Still, the distinction's practical application may be challenging, as implementation efforts often blend features of both efficacy-like and effectiveness-like designs.

What Is "Ideal" in implementation?

Ideal represents something perfect, impeccable. We do not recognise this as characteristic of implementation studies but find its interventions primarily based on assumptions on what would presumably cater to the needs of the target groups to implement particular evidence in the context it is intended for. Our shared experience often represents the testing of *facilitation* – as in people who can enable others in adopting a better way of doing things [10–17]. At first glance, assigning people to facilitate a swifter uptake and change of routines amongst healthcare staff may look like creating an ideal condition. However, there is always the effort to match support with the evidence/best practice and contextual factors recognising that it is of little use if an implementation strategy is found to work in a research project, if superfluous resources preclude scale-up in the real world.

Having tested training and/or supporting single staff, teams, with or without managers on the team, or managers solely, we recognise the necessity to stay engaged with the local context, to investigate what works in a short and long-term perspective to implement and sustain favourable change. These complex realities of organizational change risk being oversimplified by the proposed continuum from ideal to real-world because the real-world always incorporates who is on board, to what extent, with what outcomes, and at what cost.

Such prospective projects may co-exist with a more pragmatic, retrospective investigation of what worked, for whom, in what context, why (or why not) and with what outcomes [18]. Many clinical trials do or would benefit from such evaluation of what implementation efforts took place, in view of particular evidence [19]. However, we would not go as far as suggesting such retrospection exclusively represents real-world conditions, as the prospective trialing of tailored implementation strategies also takes place in and is affected by real-world factors.

Context matters: towards a double-axis model

Consequently, while the suggested continuum offers a potentially useful lens from ideal to real-world implementation, it lacks important perspectives if applied too rigidly. Thus, we suggest an additional angle representing the context. With two axes, there is the potential to report whether the implementation intervention was ideal (e.g., ample project resources provided), and whether the context was ideal at the start, throughout, and to the end of the project (say, adequate staffing, a consistent flow of regular clients, and unchanged organisational conditions) – or real-world, or something in between the endpoints for both axes; see Fig. 1 for an illustration. Such a double-axis model may help overcome the shortcoming of any single-axis model that minimizes context-dependence, which is central to implementation science.

The economic aspects and impact (recognized by Nilsen et al.) also need to be considered, both in terms of an implementation intervention and the context in which it is trialed and/or evaluated. Thus, a continuum indicator tool like the Implementation PRECIS also calls for additional means. We have found the additional and regular efforts made to facilitate implementation in everyday healthcare services difficult to capture, as are the actual costs of not progressing with implementation of presumably better services (such as safer, more person-centered,

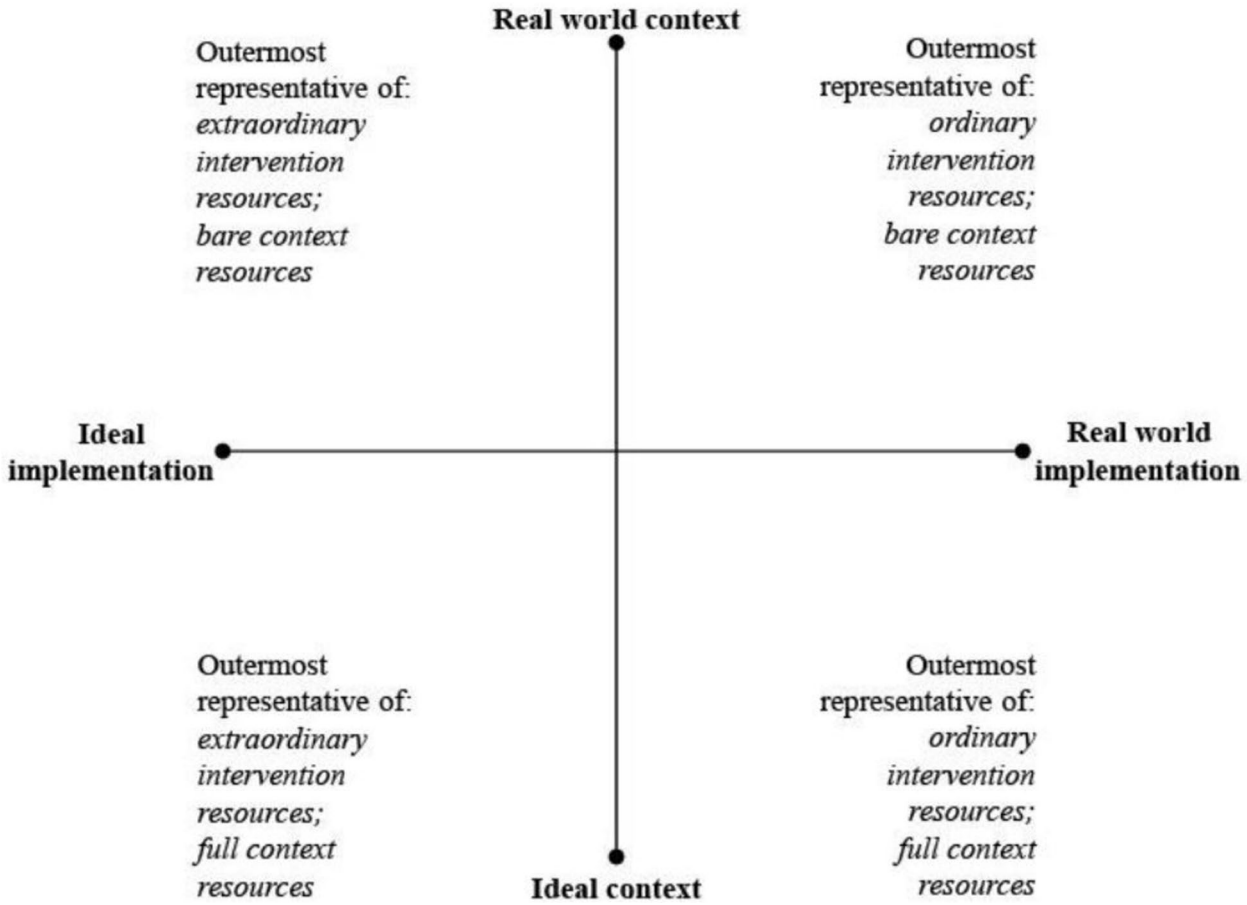

Fig. 1 A double-axis model, with endpoints for each section of the two-by-two

and/or more efficient healthcare). Although a better distinction between ideal and real-world implementation could help strengthen economic evaluations by clarifying different resource and infrastructure requirements, such clarification is difficult without its fit with the context.

Conclusion

We suggest continued testing of different implementation interventions to identify the extent of support, which is most cost-effective, in what context(s), with regard to which clinical intervention, and with what outcomes. This includes deciphering what is effective in what sense, producing which outcomes, and assessing the efficiency of which efforts, where, for whom, and in relation to which clinical evidence or best practice.

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