Current Application Status of the CFIR-ERIC Matching Tool: A Scoping Review

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Background

The Best Practice Guidelines (BPGs) of RNAO are systematically developed and evidence-based documents that provide assistance in promoting clinical care and a healthy working environment. However, there are still difficulties in applying BPGs effectively in clinical guidance. Implementation science provides rich theoretical and methodological support for implementation the BPGs. The CFIR-ERIC matching tool, developed by Waltz et al. in 2019, integrates the Consolidated Framework for Implementation Research (CFIR) with Expert Recommendations for Implementing Change (ERIC), enabling targeted generation of implementation strategies by matching contextual barriers to evidence-based strategies. The application of the CFIR-ERIC tool has begun to take shape and shows an upward trend, but there is currently no systematic review of its application status.

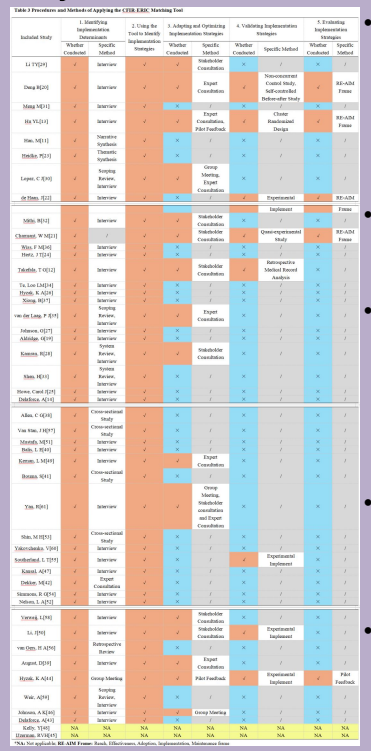
Objectives

As the first scoping review on this tool, this study aimed to systematically summarize the existing literature on the application of the CFIR-ERIC matching tool, outlining its areas of use, processes and methods employed, as well as its advantages and limitations, so as to provide a scientific basis for promoting its effective application in healthcare practice.

Methods

- Following the Joanna Briggs Institute (JBI) scoping review methodology and PRISMA-ScR guidelines.
- Systematic search of 8 databases (PubMed, Embase, Web of Science, Cochrane Library, CNKI, Wanfang, VIP, SinoMed) for studies using the tool, with a time range from April 29, 2019 (tool release) to February 8, 2025.

Key Results



- **General Characteristics:** 47 included studies (2020–2025) with increasing annual publications, mainly from the US (29.8%), Netherlands (19.1%), and China (14.9%). Qualitative studies (46.8%) and mixed-methods studies (36.2%) were most common.
- **Application Domains:** Primarily in clinical intervention improvement (46.8%) and primary healthcare (27.7%).
- **Application Process:** 95.7% of studies completed the first two steps (identifying barriers/facilitators, generating strategies), but only 8.5% completed all five steps (including optimization, validation, evaluation) — a "front-heavy and back-light" trend (see Table 3).
- **Advantages:** 53.2% of studies highlighted standardized strategy-matching (25.5%), targeted recommendations (19.1%), and high credibility (10.6%).
- **Challenges:** 42.6% of studies noted reliance on expert consensus (subjectivity, 19.1%), overly generic strategies (poor contextual adaptability, 19.1%), and unclear effectiveness validation (14.9%).

Discussion

This study is the first scoping review of the CFIR-ERIC tool, confirming its wide application and growing recognition in healthcare. Its strengths (standardization, targeting) support evidence-based implementation, but the "front-heavy and back-light" application process (insufficient optimization, validation, and evaluation) limits practical impact.

Key implications

- **Tool Optimization:** Reduce subjectivity (e.g., integrating AI for barrier-strategy matching) and enhance contextual adaptability (e.g., adding CFIR sub-constructs).
- **Research Gaps:** Future studies should emphasize full-process application, especially strategy validation and evaluation, to strengthen empirical support for the tool's effectiveness.
- This review provides a foundation for refining the CFIR-ERIC tool and advancing implementation science in global healthcare .