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Abstract Title
Bridging Research and Practice through Co-Creation: A Systematic Review of Living Labs in Child Health

Background
Healthcare faces increasing pressure to strengthen user involvement, innovation, and knowledge mobilization in today's patient-centered, knowledge-driven economy. Meeting these objectives requires innovations that enhance knowledge exchange and collaboration. Living labs, as real-time, open, user-centered systems, show strong potential to address these needs yet remain underexplored in child health.

Objective
This study aimed to fill this gap through a systematic review of living labs in child health.

Methods
We conducted a systematic review of living labs across pediatric and child health contexts guided by the PICO framework. Medline, Embase, PsycINFO, Scopus, EBSCOhost and Google Scholar were used to identify relevant publications from inception to 30 May 2024. We used a two-reviewer process and assessed methodological quality using the Mixed Methods Appraisal Tool (MMAT). We created evidence tables and tabulated data for descriptive reporting and narrative synthesis to identify current applications, approaches and promising areas for living lab development across child health contexts.

Results
We identified 960 articles, 17 of which met inclusion criteria (full-text and grey literature on living labs in pediatric and child health, across all methods, settings, interventions, and outcomes). Most studies (59%) employed multi-method approaches. All studies engaged users, primarily children and youth, with limited involvement from parents (47%), clinicians (24%), or siblings (12%). Co-creation occurred in 65% of studies, focusing on designing interventions (64%) or environments (55%). Engagement mostly occurred in everyday community settings (71%), and occasionally in hybrid or virtual environments. Reported benefits consisted of meaningful engagement (73%) and knowledge exchange (55%), while challenges included access barriers (50%) and representativity issues (33%). Ethical considerations emphasized the need for inclusivity and stakeholder collaboration.

Conclusion
Living labs are versatile environments bridging research and practice to generate context-sensitive data. Future research should give more attention to specific aspects of living labs in child health, such as co-creation during ideation.

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