IMPLEMENTATION SCIENCE

MEETING ABSTRACT   **Open Access**

Measuring constructs from the Consolidated Framework for Implementation Research in the context of increasing colorectal cancer screening at community health centers

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Background
The Consolidated Framework for Implementation Research (CFIR) is a comprehensive meta-framework widely applied to implementation related studies. Yet, few have used validated measures to operationalize constructs in CFIR in real-life settings. In this study, we operationalized selected CFIR constructs in an assessment to identify factors influencing implementation of evidence-based practices for increasing colorectal cancer screening in Community Health Centers (CHC).

Methods
We selected 16 constructs from all five domains of CFIR. Measures were developed and tested in a cross-sectional survey with CHCs' clinical staff and leaders respectively. We performed a separate confirmatory factor analysis (CFA) for measures with three or more items, computed inter-item consistency (Cronbach's alpha), inter-rater reliability (ICC) and agreement (rWG(J)) statistics, and assessed construct validity via inter-correlations among constructs at individual and organizational levels.

Results
A total of 277 individuals and 59 CHC clinics were included in the analysis. CFA showed satisfactory structural validity (CFI>0.90, TLI>0.90, SRMR<0.08, RMSEA<0.08); all measures showed reasonable reliability (alpha>0.70). The ICCs (>0.1) and rWG(J) (>0.75) suggest it appropriate to aggregate individual responses by computing clinic means. Results also suggest good construct validity at both individual and clinic levels. Inner setting and process-related constructs are correlated with most variables across domains; correlations between outer setting and intervention characteristics and other domains vary more noticeably by construct.

Implications
Our study is one of the first to quantitatively measure constructs from all five domains of CFIR and demonstrate their psychometric properties. We depicted their inter-correlations at multiple levels, which set the foundation for establishing predictive models, causal pathways and developing interventions that target these factors. These findings could contribute to further development of the CFIR.

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