

ASSESSING MULTILEVEL CONTEXTUAL FACTORS

- Bryan J. Weiner, Ph.D.



COPRH Con

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Today's Roadmap

- Describe assessment approaches
- Describe assessment tools
- Discuss measurement issues
- Survey the state of measurement



Assessment Approaches

QUALITATIVE

- Predominant approach in implementation science
- Interviews, focus groups, and observations

QUANTITATIVE

- Less often used due to data and measurement limitations
- Surveys, administrative data, and other secondary data

MIXED METHODS

Assessment Tools

- Consolidated Framework for Implementation Research
 - Interview templates, coding guides, rating system cfirguide.org
 - Self-report measures reviewed in [SIRC IRP](#), scattered in literature
- PRISM – Practical, Robust Implementation and Sustainability Model
 - Question checklist (Feldstein & Glasgow, 2008)
 - Interviews, focus groups, observations, and some secondary patient level data (McCreight et al 2019)
- TICD Checklist – Tailored Implementation for Chronic Disease
 - Question checklist (Flottorp et al 2013)
 - Self-report measures of selected constructs (Piper et al 2021)

Assessment Tools

- EPIS – Exploration, Preparation, Implementation Sustainment
 - Interviews, focus groups (e.g., Aarons et al 2014)
 - Self-report measures, administrative/program data for some constructs (Moulin et al 2019)
- TDF – Theoretical Domains Framework
 - Self-report measures (Huijig et al 2014)
 - Interviews, focus groups (e.g., Debono et al 2017; Lynch et al 2016)
- Health Equity Implementation Framework
 - Interviews (Woodward et al. 2019)
 - Note: quantitative measures in PhenX Toolkit

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Going Qualitative

- Advantages:
 - Quick and easy
 - Works with small samples
 - Potential for richness, depth, nuance
 - Builds rapport, fosters empathy

- Disadvantages:
 - Few templates for interview guides and codebooks
 - Interview guides and codebooks not available
 - Challenging to write interview questions for abstract concepts
 - Challenging to code abstract concepts in natural spoken language

Going Quantitative

Reliability: the quality of assessment. In its everyday sense, reliability is about the "consistency" or "repeatability" of your measures.

- Inter-Rater or Inter-Observer Reliability
- Test-Retest Reliability
- Parallel-Forms Reliability
- Internal Consistency Reliability

Going Quantitative

Validity: the accuracy of an assessment. In its everyday sense, validity is about whether your measure measures what it is supposed to measure

- Face, content validity
- Predictive validity
- Concurrent validity
- Known-groups validity
- Convergent and discriminant validity

Going Quantitative

Practicality: the usefulness and ease of use of an assessment.

- Relevant to stakeholders
- Low burden on respondents and staff
- Actionable
- Sensitive to change

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What Do We Want to Measure?

Categories	Frameworks	Sample constructs
Determinants	CFIR TDF	Implementation climate, organizational culture, structural characteristics Self-efficacy, knowledge and beliefs, social/professional role
Processes	SIC	Implementation speed/pace Sequencing/ordering Stage completion
Outcomes	RE-AIM IOF	Reach, adoption, fidelity, maintenance Acceptability, appropriateness, fidelity, feasibility, penetration, cost

What is the Problem?

Measures are poorly distributed

Many measures have unknown / dubious quality


Measures exhibit synonymy, homonymy, instability

Measures are not practical (pragmatic)

Sidebar: measures are poorly reported and indexed



What is the Current State?

 **NIH Public Access**
Author Manuscript
Health Educ Behav. Author manuscript; available in PMC 2013 February 01.

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Health Educ Behav. 2012 February ; 39(1): 87–105. doi:10.1177/1090198111409748.

Systems Antecedents for Dissemination and Implementation: A Review and Analysis of Measures

Karen M. Emmons¹, Bryan Weiner², Maria Fernandez³, and Shin-Ping Tu⁴

¹Center for Community-Based Research, Dana-Farber Cancer Institute, & Harvard School of Public Health

²University of North Carolina

³University of Texas at Houston

⁴University of Washington

NIH-PA Author Manuscript

What is the Current State?

Chaudoir *et al.* *Implementation Science* 2013, **8**:22
<http://www.implementationscience.com/content/8/1/22>



SYSTEMATIC REVIEW

Open Access

Measuring factors affecting implementation of health innovations: a systematic review of structural, organizational, provider, patient, and innovation level measures

Stephenie R Chaudoir^{1,3*}, Alicia G Dugan^{2,3} and Colin HI Barr³

What is the Current State?

Adm Policy Ment Health
DOI 10.1007/s10488-014-0551-7

ORIGINAL PAPER

Measures for Predictors of Innovation Adoption

**Ka Ho Brian Chor · Jennifer P. Wisdom ·
Su-Chin Serene Olin · Kimberly E. Hoagwood ·
Sarah M. Horwitz**

© Springer Science+Business Media New York 2014

What is the Current State?

Lewis et al. *Implementation Science* (2015) 10:2
DOI 10.1186/s13012-014-0193-x



METHODOLOGY

Open Access

The Society for Implementation Research Collaboration Instrument Review Project: A methodology to promote rigorous evaluation

Cara C Lewis^{1,2*†}, Cameo F Stanick^{3*†}, Ruben G Martinez^{1,7}, Bryan J Weiner⁴, Mimi Kim⁵, Melanie Barwick⁶
and Katherine A Comtois²

Are There Some Good Measures Out There?

Construct	Measure	Source
Attitudes	Evidence-Based Practice Attitudes Scale	Aarons et al 2004
Leadership	Implementation Leadership Scale	Aarons et al 2014
Readiness	Organizational Readiness for Implementing Change	Shea et al 2014
Implementation Climate	Implementation Climate Implementation Climate Scale	Jacobs et al. Earhart et al. 2015