



Center for Mental Health Services Research

GEORGE WARREN BROWN
SCHOOL OF SOCIAL WORK



Washington University in St. Louis

A Systematic Review of Implementation Strategies in Mental Health Service Settings

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Implementation Strategies

“Systematic intervention processes to adopt and integrate evidence-based health innovations into routine care”



What is Known About the Effectiveness of Implementation Strategies?

- Several Systematic Reviews in Health
 - Several strategies have been found to be effective under some, but not all circumstances (Bero et al., 1998; Gilbody et al., 2003; Grimshaw et al., 2004, 2006)
 - Most strategies result in modest improvements in performance (i.e., no “magic bullet”)
 - Passive approaches (e.g., “train and pray”) are generally ineffective
 - Mixed-evidence regarding the effectiveness of multi-faceted interventions (Grimshaw et al., 2006; Wensing et al., 2009)



Purpose

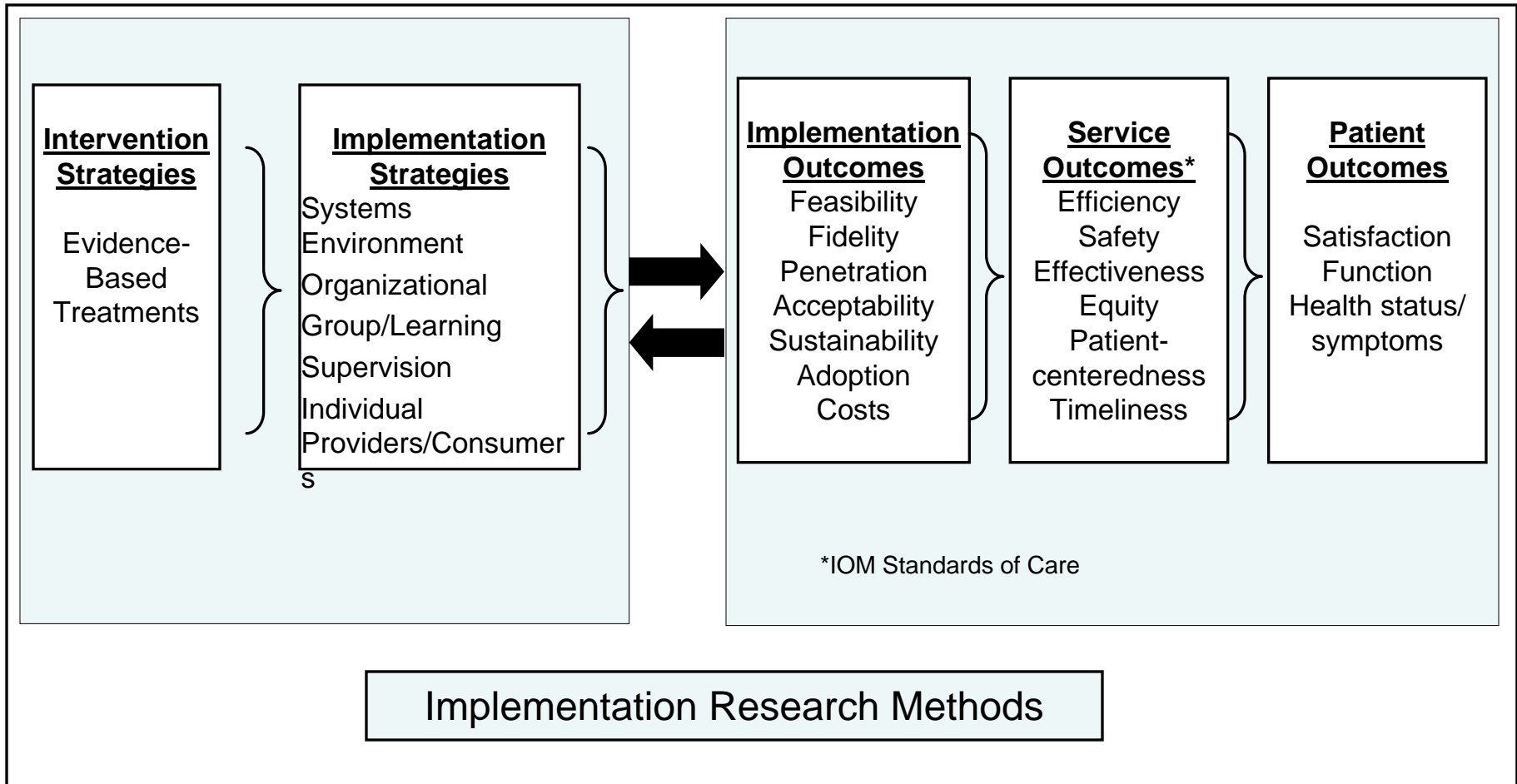
Few reviews focusing on implementation strategies in mental health. Our purpose is:

1. To characterize rigorous studies of implementation strategies in mental health

2. To demonstrate what we have learned about the effectiveness of implementation strategies in mental health service settings



Guiding Conceptual Model #1: Proctor et al.'s Conceptual Model of IR





Guiding Conceptual Model #2: Consolidated Framework for IR (CFIR)

Intervention Characteristics

Evidentiary support, relative advantage, adaptability, trialability, and complexity

Characteristics of Individuals

Knowledge, self-efficacy, stage of change, identification with organization, etc.

Inner Setting

Structural characteristics, networks and communications, culture, climate, readiness for implementation

Outer Setting

Patient needs and resources, organizational connectedness, peer pressure, external policy and incentives

Process of Implementation

Planning, engaging, executing, reflecting, evaluating



Descriptive Research Questions

- What types of strategies have been rigorously evaluated?
- What conceptual domains (of the CFIR) do the strategies address?
- What types of outcomes are assessed?
- What can we learn from the methodological strengths and weaknesses of implementation studies?



Effectiveness Research Questions

- What types of strategies are most effective in improving clinical and implementation outcomes?
- Are multifaceted strategies more effective than discrete strategies?
- Are multifaceted implementation strategies that address multiple theoretical domains more effective than those that address fewer domains?



Methods

Databases:

CINAHL Plus, Medline, PubMed, PsycINFO, SocINDEX, and hand search of *Implementation Science* and selected articles

Search Term Concepts:

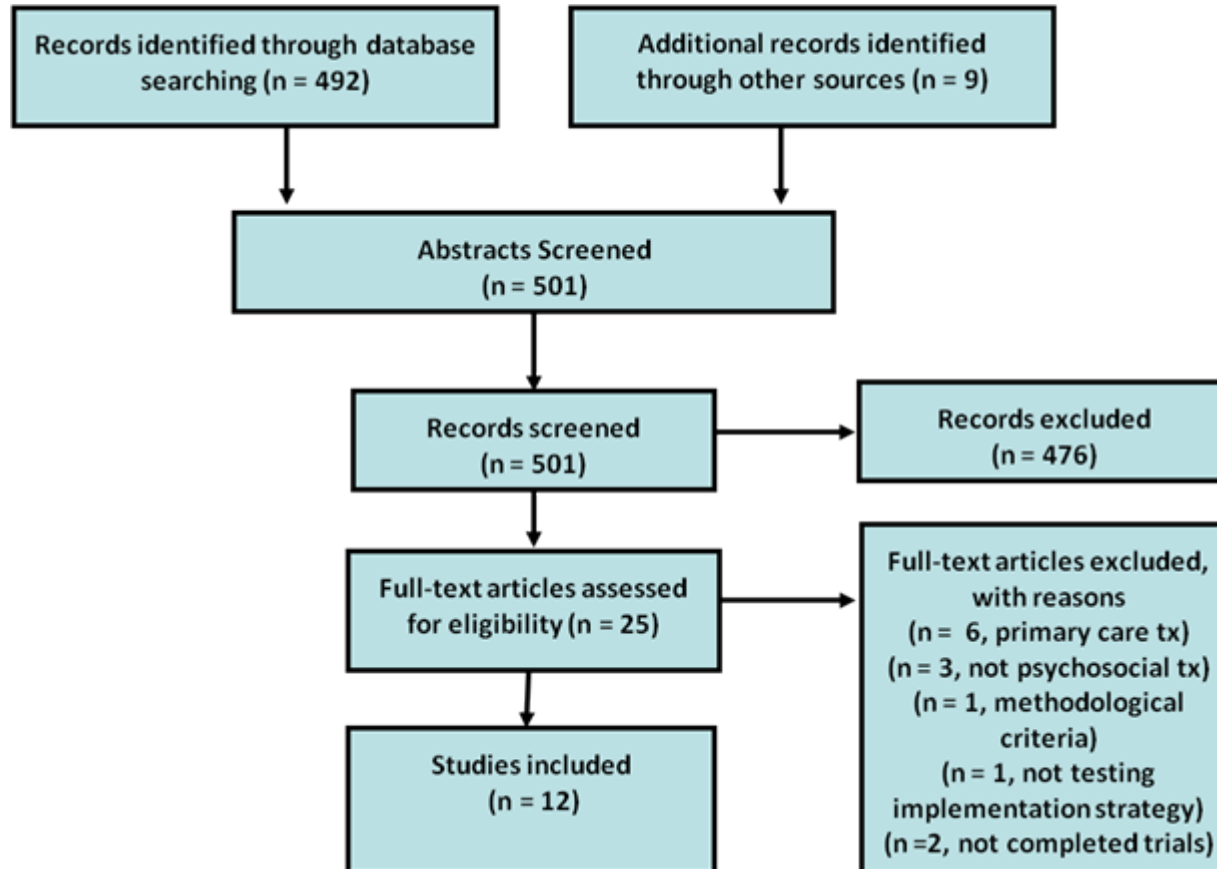
Implementation (McKibbin et al., 2010); Evidence-based practice; Mental health; Study Designs

Inclusion Criteria:

1. Empirical research on the implementation of an evidence-based psychosocial treatment or guideline
2. Must involve both implementation strategy and clinical intervention
3. Comparison design meeting Cochrane EPOC's standards of rigor (RCT, CCT, ITS, CBA)



Study Identification Flowchart (n = 12)





Data Extraction

- Cochrane EPOC Abstraction Form
 - Clinical intervention
 - Strategies
 - Quality criteria
 - Outcomes
 - Results
- CFIR Checklist
 - What theoretical domains did the strategies target?
- Two reviewers independently extracted data



Examples of Strategies Evaluated

- Mailing targeted practice guidelines
- Educational materials
- Training workshops
- Opinion leaders
- Audit and feedback
- Supervision and consultation
- Networking with other organizations
- Organizational capacity building
- Stakeholder engagement



Characteristics of Strategies Evaluated

- Only one study (8%) evaluated a discrete strategy
- 92% were multifaceted
- Average number of strategies evaluated = 5.17
(SD = 2.95, Range 1-12)



Lessons from Methodological Strengths and Weaknesses

- Limited theoretical justification for the selection of strategies
 - Only 42% cited a specific theory
 - Most cited Rogers' Diffusion Theory
 - Few used theory to explicitly guide the selection of strategies or to test specific propositions
- Description of strategies was sometimes very poor (note: Michie et al., 2009)
- We need more valid and reliable implementation outcome measures



Characteristics of Strategies (Cont.)

CFIR Domain:	Percent of Studies That Addressed it:
Characteristics of Intervention:	25%
Characteristics of Individuals:	75%
Inner Setting:	58%
Outer Setting:	33%
Process of Implementation:	75%

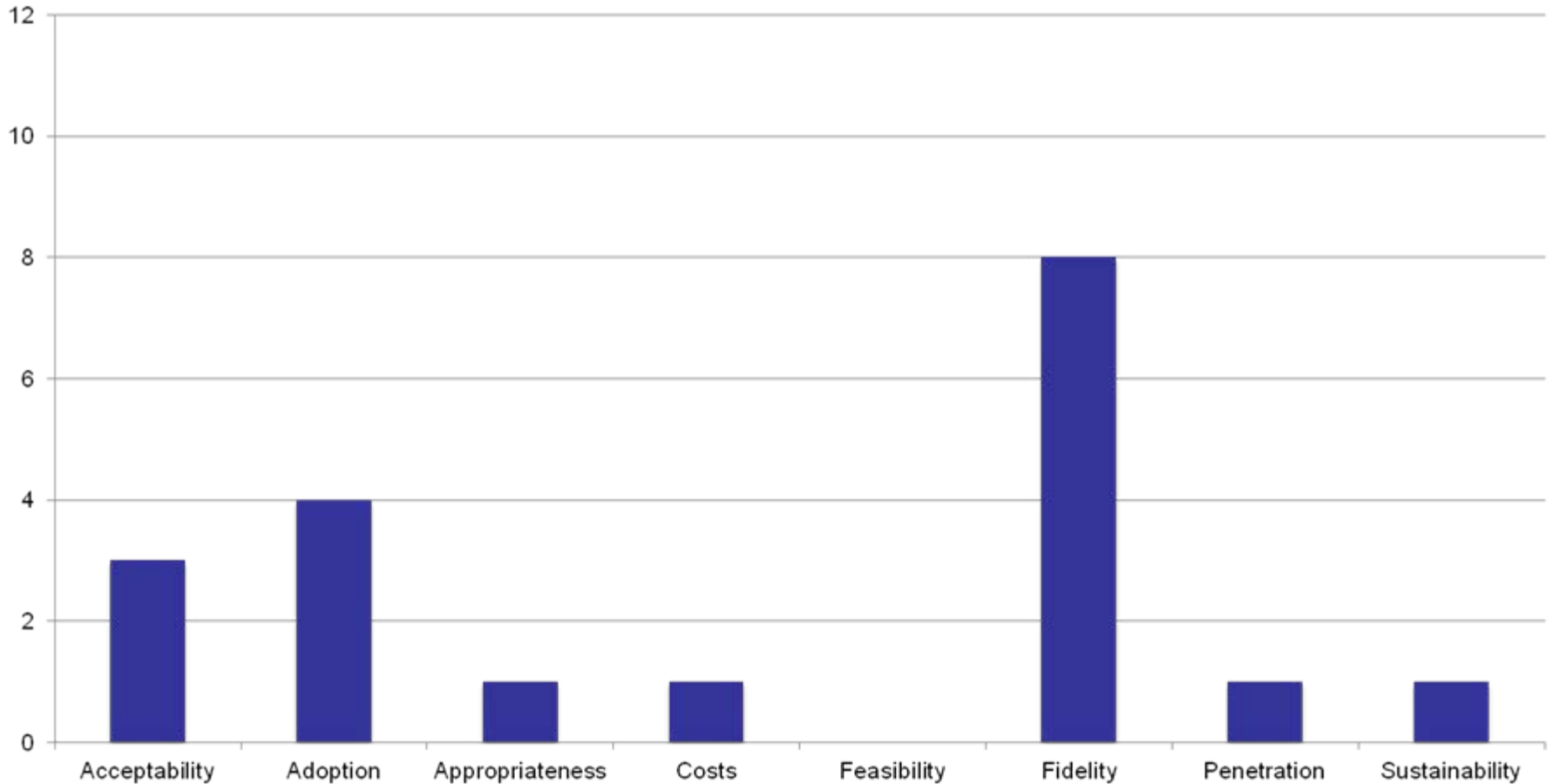


What Outcomes Were Assessed?

- 92% of studies evaluated at least one implementation outcome
- 33% evaluated both implementation and clinical outcomes
- The average number of implementation outcomes per study was 1.67 (range = 1-4)



What Implementation Outcomes Were Assessed?





Outcomes Attained

- 66% attained a statistically-significant positive result on at least one primary implementation or clinical outcome
- We did not examine effect size due to heterogeneity of outcomes assessed



Results According to # of Strategies and Conceptual Domains Addressed

	Non-Significant (n = 4)	Significant (n = 8)
Mean # of Strategies Employed	4 (SD = 2)	5.75 (SD = 3.28)
Mean # of CFIR Domains Addressed	2 (SD = .82)	3 (1.20)



Implications for Future Research

- IR should be theory driven
- IR should integrate cost data whenever possible
- An expanded range of implementation outcomes should be evaluated
- We need objective indicators of behavior change (i.e., not solely self-report)

Implications for Future Research (Cont.)

- We need to develop/test strategies that move beyond targeting individual professionals
- More attention should be given to the acceptability and feasibility of strategies
- We need a suite of reporting guidelines for different types of implementation research (Eccles et al., 2009; It would be great to see a SIRC group take on this task)



Limitations

- Heterogeneity in implementation strategies, clinical interventions, outcomes, and measures makes comparing strategies difficult
- Methodological weaknesses may be attributed to poor reporting (or page limitations)
- Lack of established reporting guidelines for IR studies make quality assessment difficult
- Many limits inherent to RCTs and other “rigorous” designs
- Haven’t “vetted” our list of studies and asked for additional ones



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