



Center for Mental Health Services Research

GEORGE WARREN BROWN
SCHOOL OF SOCIAL WORK

 Washington University in St. Louis

Conceptual models and implementation strategies to enhance implementation research and real-world care: Findings from the substance use disorder treatment literature

JE Glass, BJ Powell, AC Bunger¹, R Santens, AM
Hamilton, AA Baumann, EK Proctor

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George Warren Brown School of Social Work, Washington University in St Louis
Cecil G. Sheps Center for Health Services Research, University of North Carolina, Chapel Hill¹



Implementation theory and conceptual models

- Theories and conceptual models guide our research questions
- They should help us design studies to test them
- Reviews have identified over 20 conceptual models explaining implementation processes (Damschroder et al., 2009)



Research questions

To what extent has implementation theory guided implementation studies in the substance use disorder treatment field?

How might the use of theory improve the design and rigor of implementation studies?

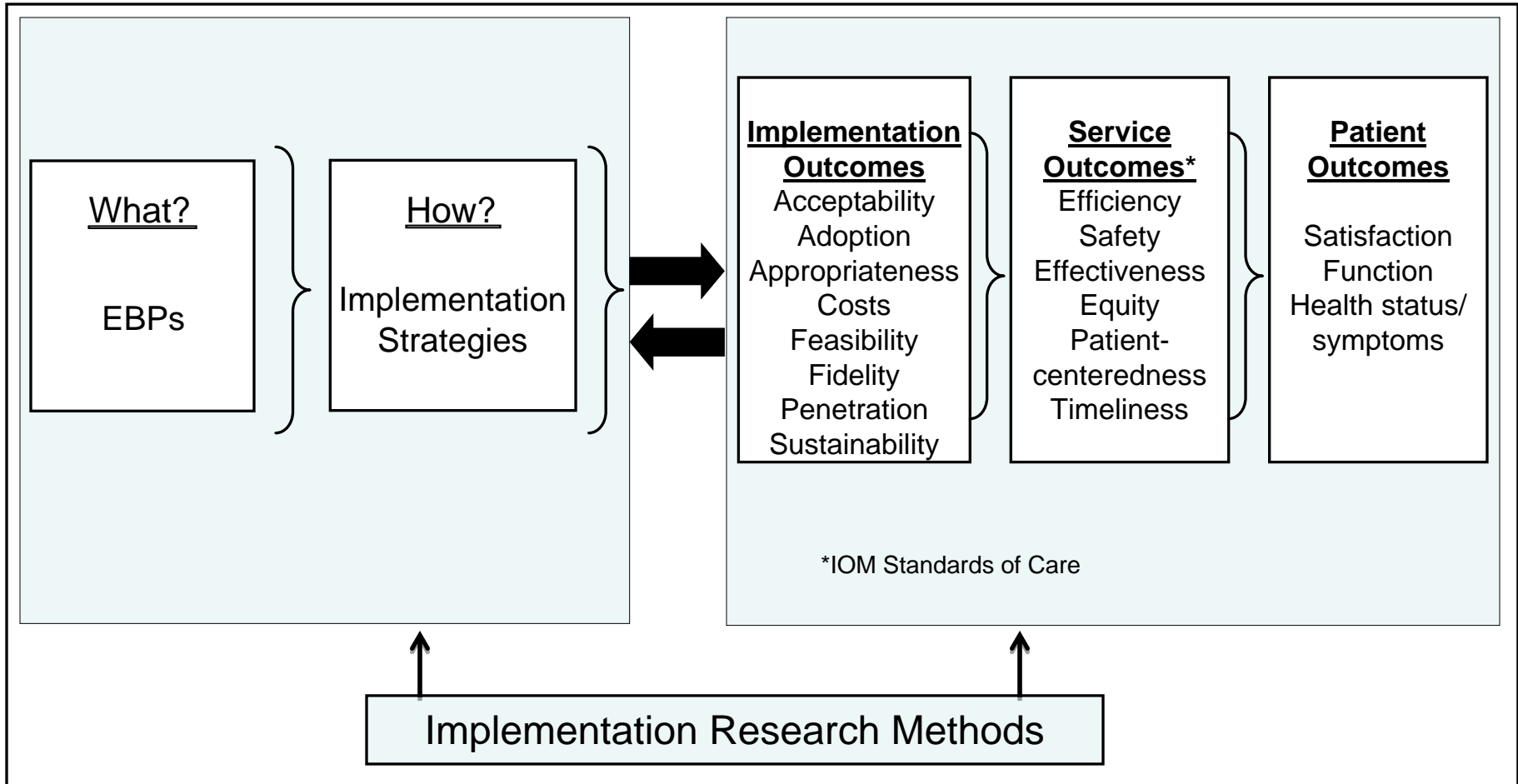


Method

- Systematic review of implementation research in specialty substance use disorder care
- CINAHL Plus, MEDLINE, and PsycINFO
- Inclusion criteria
 - “Active implementation efforts”: implementation strategies were used to bring evidence-based treatments into real-world care
 - Quantitative or mixed-methods studies



Methodological rigor: A conceptually-informed assessment





Measurement of implementation strategies

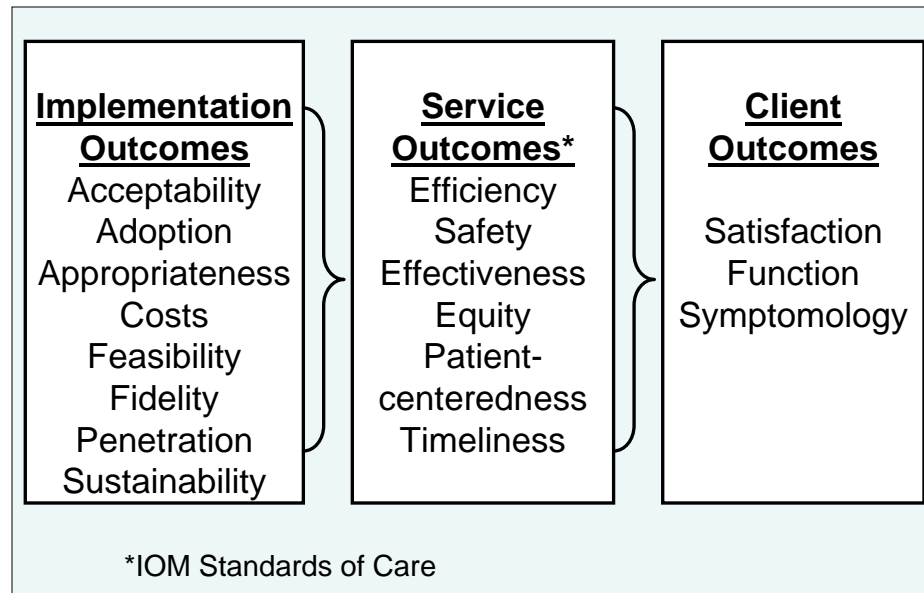
- Identified the implementation strategies used in each study
- Referenced a discrete strategies compiled by Powell et al.
 - ~70 discrete strategies described with sufficient detail
 - Grouped under 6 headings
- Summed the number of strategies in each study

Powell, BJ; McMillan, JC; Carpenter, CR; Griffey, RT; Bunger, AC; Glass, JE; York, JL; Proctor, EK (revise/resubmit). A compilation of strategies for implementing clinical innovations in health and mental health.



Measurement of implementation outcomes

- Proctor and colleagues' outcomes for implementation research



Proctor, E., Silmere, H., Raghavan, R., Hovmand, P., Aarons, G., Bunger, A., et al. (2011). Outcomes for implementation research: conceptual distinctions, measurement challenges, and research agenda. *Adm Policy Ment Health*, 38(2), 65-76.



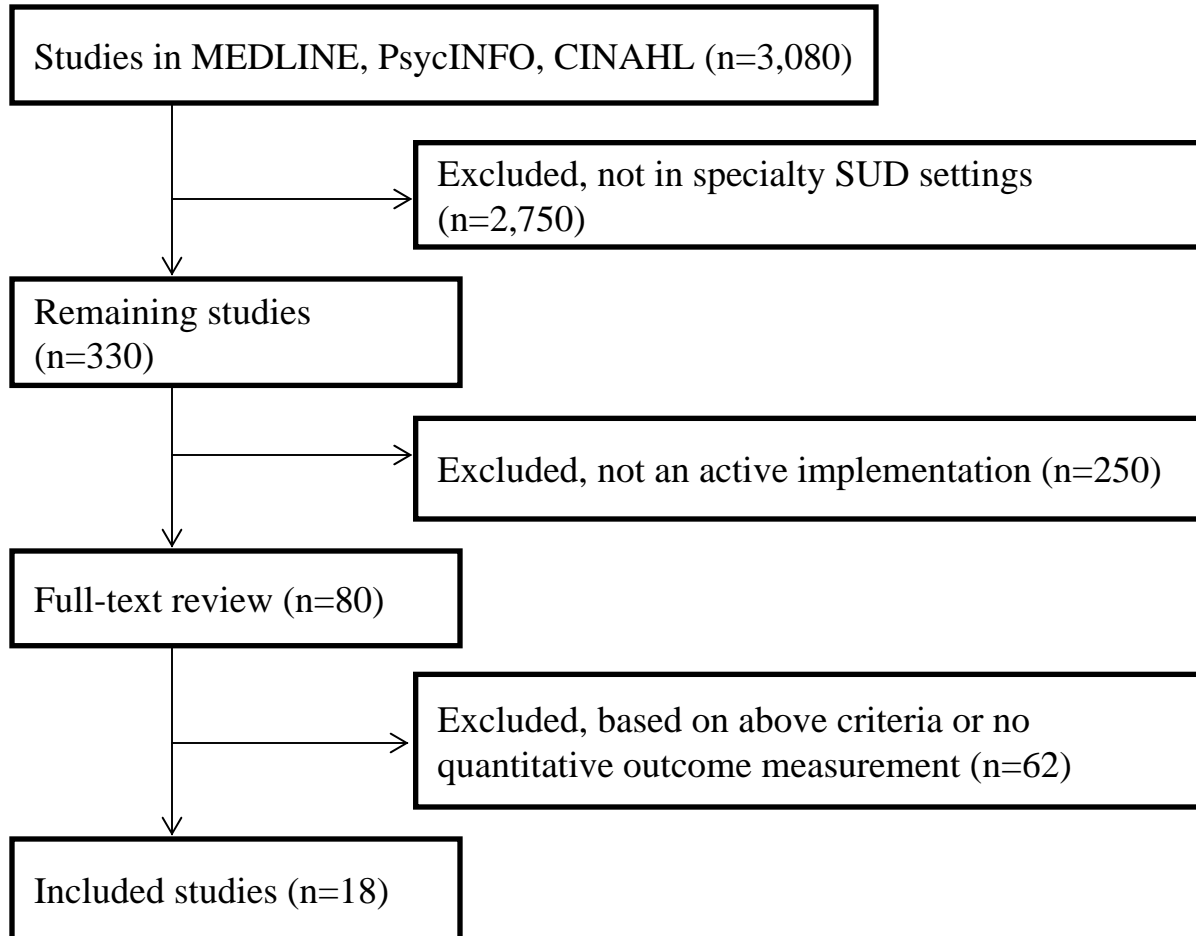
Measurement of implementation theory

Dichotomous variable indicating whether studies were informed by implementation research theory:

1	Used implementation theory
0	No implementation-specific theoretical guidance



Results: Included studies (n=18)



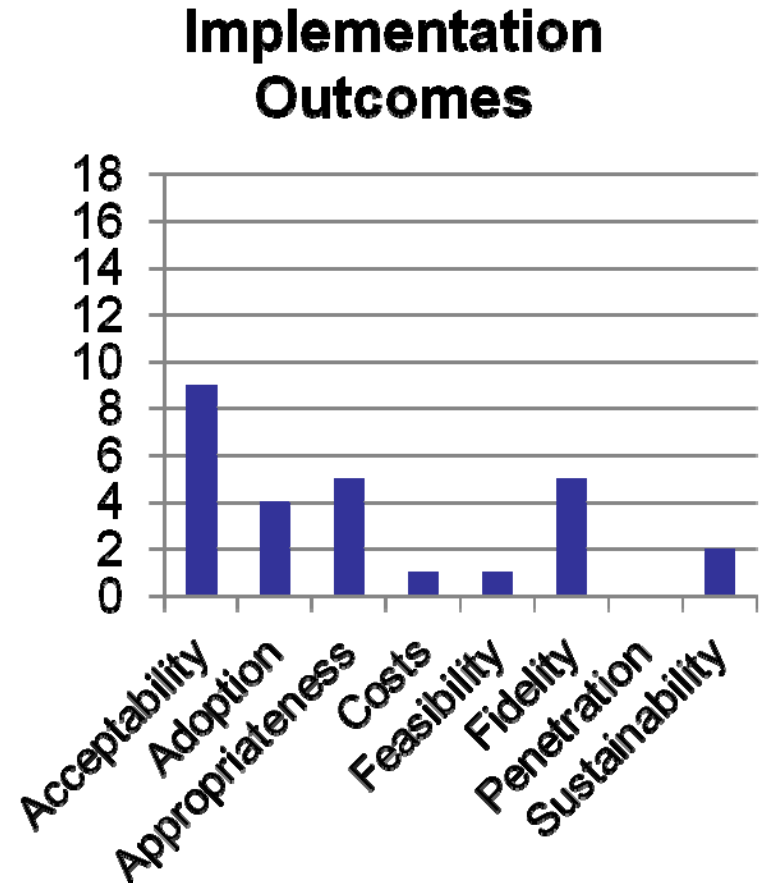
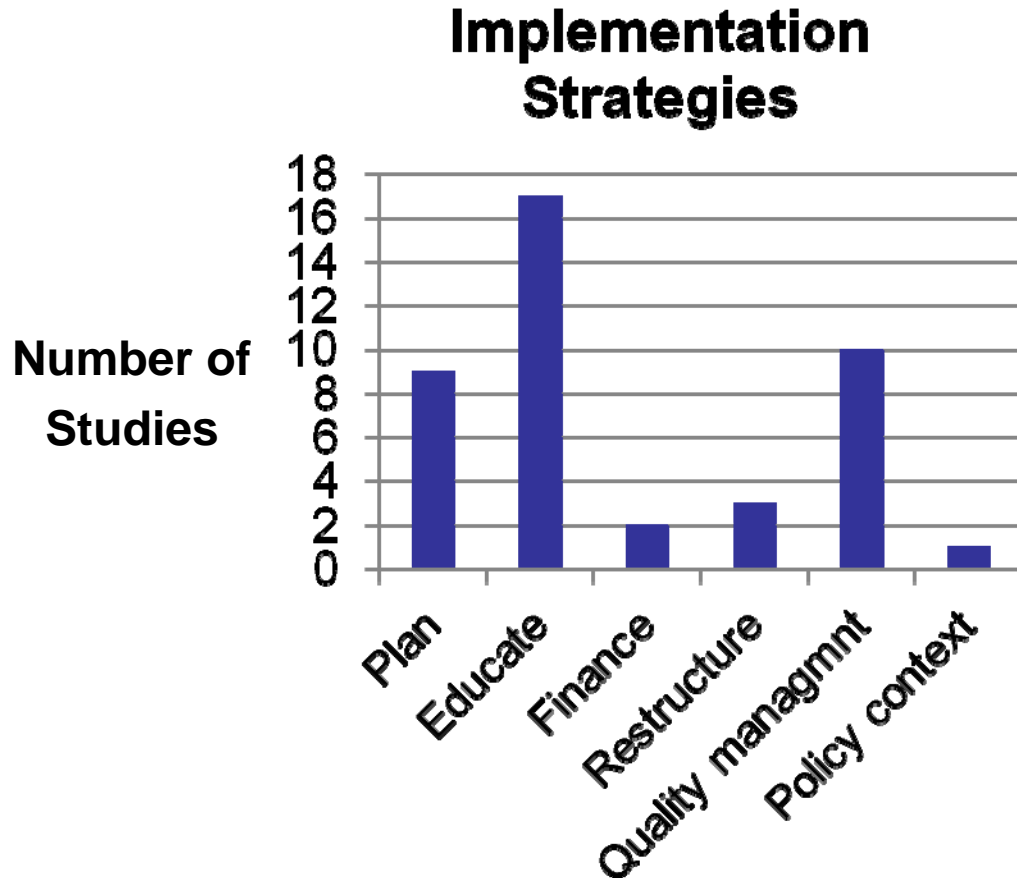


Results: Study characteristics (n=18)

Characteristic	N (%) or Mean (SD)	Range
Used implementation theory	9 (50.0%)	--
Implementation strategies	6.0 (3.8)	1 -14
Implementation outcomes	1.8 (1.5)	0-5
Client outcomes	0.9 (1.4)	0-4
Service system outcomes	0.8 (1.6)	0-5



Results: Implementation strategies and implementation outcomes





Results: Correlation between theory and the conceptual domains

Conceptual domain	Correlation with Theory Index
Implementation Strategies	0.6**
Implementation Outcomes	0.1
Service System Outcomes	0.5*
Client Outcomes	-0.4

*p < 0.05

**p < 0.01



Summary

- Half of the studies incorporated some use of implementation theory
- Studies guided by implementation theory appeared to use more implementation strategies
- No relationship between theory and measurement of implementation outcomes



Recommendations

- Theory use may help inform strategies – the moving parts
- Our theories must also inform the *mechanisms* of change
- The outcomes of implementation need more attention



Recommendations

- An ideal implementation study uses theory to:
 - Inform and explain problem at hand
 - Justify the selection of implementation strategies
 - Evaluate implementation outcomes that would support or falsify the propositions
 - Reflect back on the theory when discussing findings



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Joseph E. Glass

George Warren Brown School of Social Work

Washington University in St. Louis

jeglass@wustl.edu



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