



Constructing and Deconstructing Evidence-Based Programs

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OPRE 2020 Methods Meeting: Exploring Core
Components Research in Social Services
Settings

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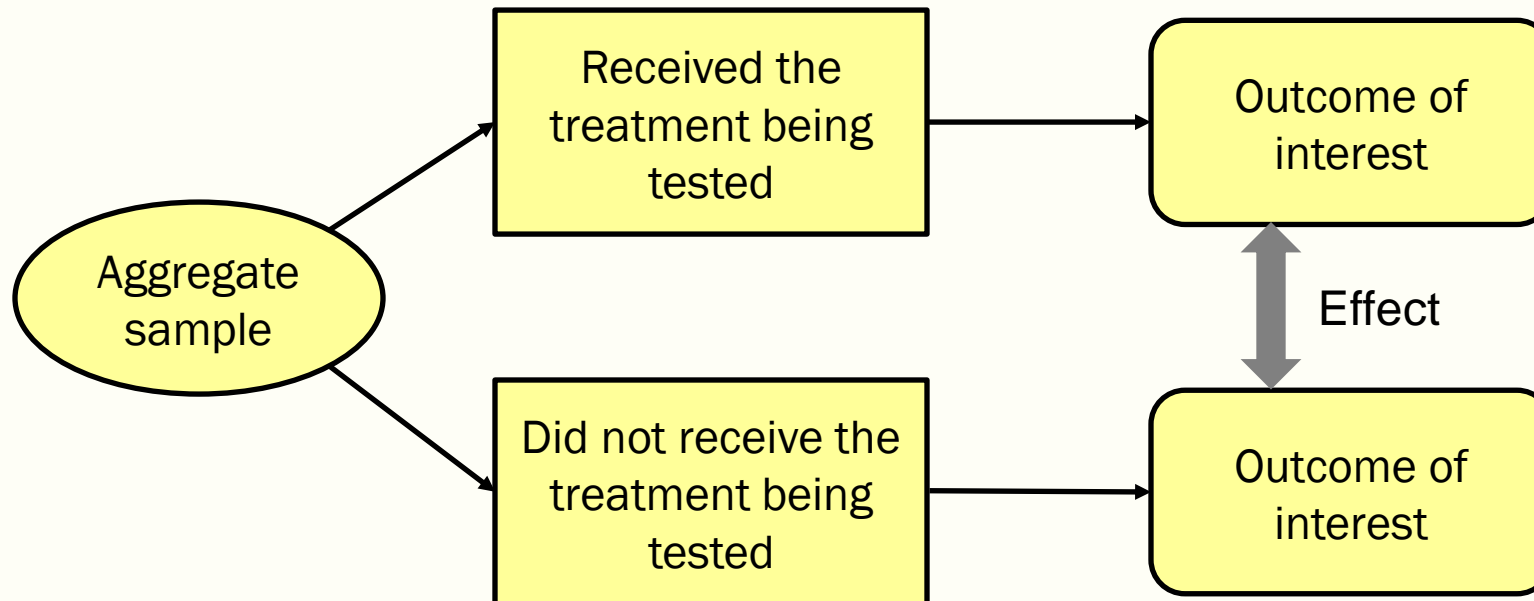


Evidence-Based Programs Framework

- **Evidence.** Methodologically credible research on the effects of programs/treatments on desired outcomes; e.g., randomized control trials (RCT), strong quasi-experiments.
- **Bridge to Practice.** Translation and dissemination of research findings in a form available to practitioners; e.g., research reports, treatment manuals, professional training registries of effective programs, marketing by purveyors.
- **Policy Push.** Policy context that promotes use of evidence-based practices; e.g., professional practice standards, state EBP legislation, FDA, Government Performance and Results Act, Foundations for Evidence-Based Policymaking Act.

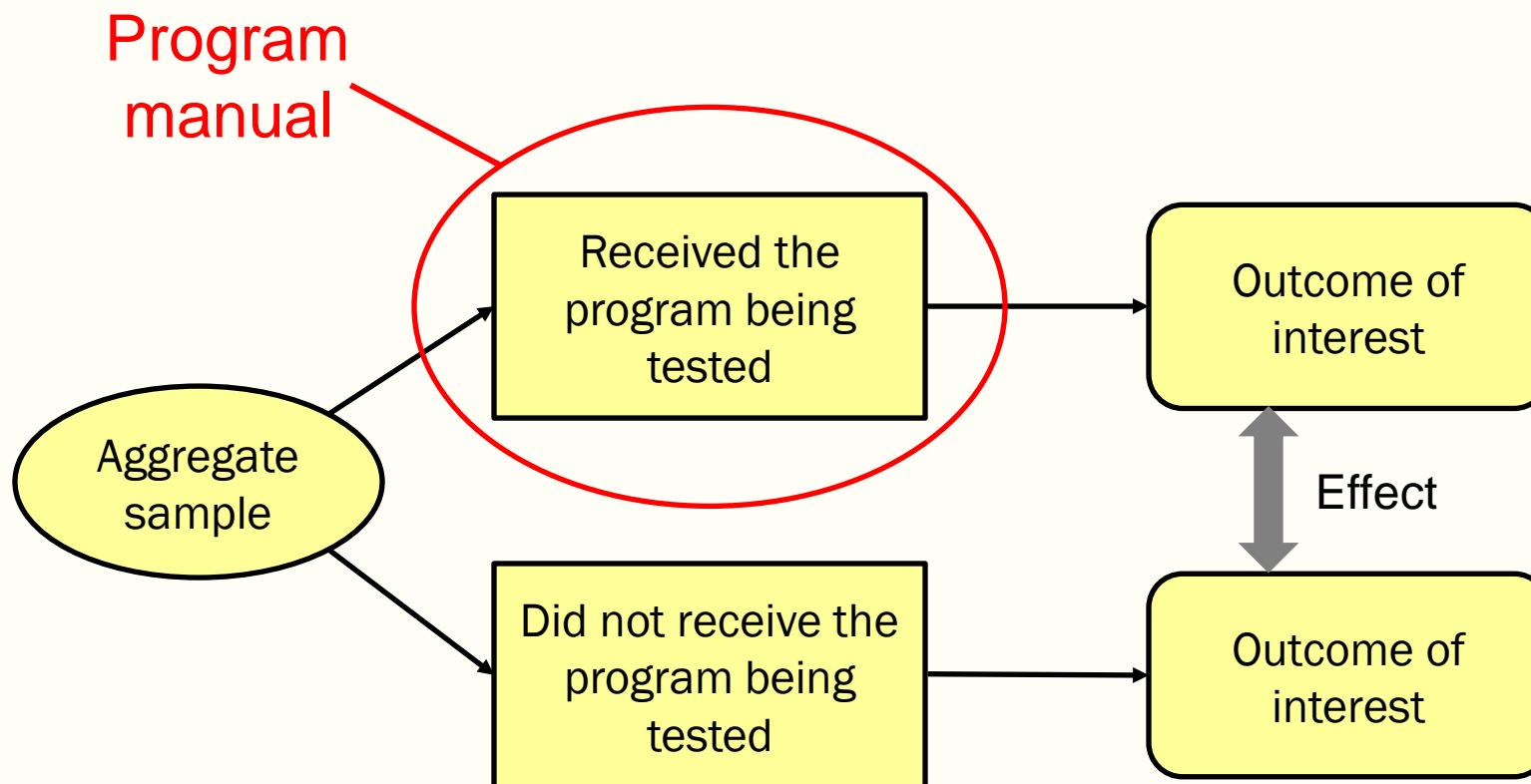


Evidence Cornerstone: Treatment Condition vs. Counterfactual Condition





Current EBP Paradigm: Describe and Disseminate via Program Manual





Current EBP Paradigm: Curated Registries of Manualized Programs

For example:

- National Registry of Effective Programs & Practices (NREPP) 1997; HHS Substance Abuse and Mental Health Services Administration
- What Works Clearinghouse (WWC) 2002; DOE Institute for Education Sciences
- Model Programs Guide/CrimeSolutions.gov 2000; DOJ Office of Juvenile Justice & Delinquency Prevention, National Institute of Justice
- Blueprints for Violence Prevention 1996; now Blueprints for Healthy Youth Development; University of Colorado
- Social Programs that Work 2015; Arnold Ventures' Evidence-Based Policy team
- California Evidence-Based Clearinghouse for Child Welfare (CEBC) 2006; California Department of Social Services (CDSS)




Problems with the EBP Paradigm for Social-Psychological-Behavioral Programs

- Inherent variability/complexity
- Proliferation of programs and manuals, often variations on the same approach
- Obstacles to uptake: provider resistance, cost, fidelity-adaptation issues, doubts about applicability to local clients and needs



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Variability in Programs and in Their Effects

Low variability/complexity

- Interventions in physical systems; e.g., lead paint removal, weatherization of housing
- Medical interventions in physiological systems; e.g., pharmaceuticals, surgery
- Training distinct skills, variable pedagogy; e.g., middle school algebra curriculum, teaching welding skills
- Motivating defined behavior or behavior change; e.g., substance use, safe sex, delinquency
- Interpersonal interactive programs; e.g., psychotherapy, mentoring, home visitation, family therapy

High variability/complexity



Consequences of Complexity & Variability

- Practical challenges following the manual with high fidelity and no local adaptations.
- Erratic replication of program effects; difficult to establish a robust conclusion of effectiveness (e.g., recent tiered evidence initiatives).
- Multiplicity of program variants with revisions by developers, local adaptations, and generic versions similar to the manualized versions.
- The logic of the current EBP paradigm is that all these variants should be evaluated in randomized studies and added to the registries.



An Evolving Alternative: Unpacking Program Packages

- Families of similar programs have common features that can be summarized in a form that can guide practice without requiring emulation of any one specific program.
- Very active exploration is underway of various different approaches to defining, finding, and characterizing those “active ingredients.”
- No single best approach has emerged, or is likely to, but there are a number of promising formulations that are relatively well-developed.



Inside Program Packages: Illustrative Examples of Conceptualizations of Program Ingredients

- **Core components:** Essential principles or functions, and associated elements and activities for program implementation that are judged necessary to produce the desired outcomes (Blase & Fixsen, 2013).
- **Modules:** Freestanding procedures that address specific clinical issues and are sequenced into the full treatment regimen; e.g., for self-calming, modifying negative cognitions, increasing compliance with instructions (Weisz & Chorpita, 2012).



Inside Program Packages: More Examples of Conceptualizations of Program Ingredients

- ***Kernels:*** Fundamental indivisible behavior influence-procedures shown to affect one or more specific behaviors; e.g., time out, written praise notes, nasal breathing/”doing turtle” (Embrey & Biglan, 2008).
- ***Practice elements:*** Discrete treatment techniques or strategies found in the treatment protocols of programs that outperform comparison conditions in randomized trials; e.g., goal-setting, modeling, therapist praise/rewards (Chorpita & Daleiden, 2009).



Inside Program Packages: More Examples of Conceptualizations of Program Ingredients

- ***Behavior change techniques***: Observable, replicable, and irreducible components of an intervention designed to alter or redirect causal processes that regulate behavior; an “active ingredient;” e.g., feedback, self-monitoring, reinforcement (Michie et al., 2013).
- ***Quality indicators***: Program performance measures derived from research, observation, and expert consensus that are characteristic of effective programs (Smith et al., 2012).



Inside Program Packages: More Examples of Conceptualizations of Program Ingredients

- ***Effective program components:*** Program characteristics derived from meta-analysis of controlled intervention studies that are independently predictive of the effect sizes on target outcomes (Wilson, Lipsey, Aloe, & Sahni, 2020).
- ***Change mechanisms:*** Mediational pathways through which interventions have their effects on the target outcomes (Ng, DiVasto, Cootner, Gonzalez, & Weisz, 2020).



Bridges to Practice Based on Program Ingredient Approaches

- Standards of practice organized around principles of effective practice
- Program guidelines/best practice guidelines
- Decision trees for selecting program components to optimize effectiveness
- Quality assessment schemes
- Expected effectiveness assessment



Thanks!

Questions & comments welcomed

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