Systematic review of adaptations of public health evidence-based interventions


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Program Adaptation

Changes to an efficacious program or its components to meet the needs of a new population and community while retaining fidelity to its core elements (Solomon, 2006)

Definitions:
• **Changes:** Modifications or alterations
• **Fit:** Reduce mismatches between original EBI to new population/needs/context, increase fit
• **Fidelity:** Implementing with program fidelity;/ without diluting program’s effectiveness; compromising/deleting program’s core elements

A few mentioned planned vs. unplanned adaptations
Purpose of the Study

To assess adaptations of evidence-based, public health interventions in the published literature

Research questions:

- What are the reasons for and common types of adaptations being made to EBIs as reported in the literature?
- What steps are reported for making adaptations to EBIs?
- What individual, intervention and organizational outcomes are assessed in evaluations of adapted EBIs?
Methods

Studies identified through searches of PubMed, PsycINFO, PsycNET and CINAHL

Search concepts:
*adaptation, evidence-based interventions and practice, health behavior, and quality of healthcare*

Inclusion criteria:
1) published in English,
2) published after 1995, and
3) examined the adaptation process or outcomes of an adapted evidence-based, public health program/policy
Data Abstraction

Two researchers independently abstracted:

1. **EBI characteristics**
   - Original/adapted EBI, disease/topic, location

2. **Reasons for adaptation**

3. **Types of modifications**
   - Context, content modifications (Stirman et al., 2013)

4. **Type of adaptation steps taken from common adaptation frameworks** (Escoffery et al., in press)

5. **Implementation outcomes** (Proctor et al., 2011)
   - Intervention outcomes
Flow Diagram of Reviewed Articles

- Records - duplicates removed (k = 543)
- Titles & abstracts screened for relevance (k = 521)
- Excluded 1 (k = 461)

- Full-text articles assessed (k = 60)
- Excluded 1 (k = 15)
  - 5 = clinical
  - 2 = lack of details
  - 7 = protocol, survey
  - 1 = not intervention

Articles included in the analysis (k = 45)
*42 unique programs

1 not a primary study or description of an adaptation method/process of a public health EBI; described the adaptation of a measure/scale or was a background/review article
Results - Study Characteristics (n=42)

- Publication years 2003 - 2014
- Common disease topics = HIV/AIDS, mental health, substance abuse, and chronic illnesses
- Most (k=27) reported on U.S. adaptations
Results - Reasons for Adaptation

- **Common reasons:**
  - new culture \((k=27; 64.3\%)\)
  - new target population \((k=25; 59.5\%)\)
  - new community setting \((k=24; 57.1\%)\)

- **Less common reasons:**
  - improve ease of implementation
  - improve accessibility
  - condense the original intervention
Results - **Adaptation Frameworks**

- 15 articles (36%) referenced a pre-existing framework
- Most commonly mentioned = Ecological Validity Model, Map of the Adaptation Process, and Cultural Adaptation Framework (2 studies each)
- Others mentioned at least once = Diffusion of Innovation, Replicating Effective Programs, CDC’s Adaptation Traffic Light, ADAPT-ITT
Content Adaptations

- Tailoring: 71
- Adding elem: 31
- Shortening: 29
- Removing elems: 24
- Loosening structures: 21
- Lengthening: 17
- Substitution: 12
- Integrating approach: 10
- Reorder elems: 5
- Integrating intervention: 2
- Departing: 2
- Repeat elements: 5

Stirman et al., 2013, Coding system for modifications and adaptations
Stirman et al., 2013, Coding system for modifications and adaptations
Steps in Adaptation

- Conduct asstmt: 88%
- Select EBI: 55%
- Determine level of change: 74%
- Train staff: 74%
- Consult experts: 71%
- Prepare materials: 88%
- Pilot: 57%
- Implement: 83%
- Evaluate: 76%

Escoffery et al., in press, A scopying study of adaptation frameworks
Implementation Outcomes

Proctor et al., 2011, Implementation Outcomes
Other Intervention Outcomes

- Environment: 10
- Practice: 21
- Health: 7
- Skills: 7
- Attitudes: 7
- Self-efficacy: 12
- Knowledge: 16
- Behavior: 71
- Satisfaction: 26
Implications for D&I Research

- This study described adaptation of EBIs in the literature; more research is needed to better understand how adaptations are occurring.

- Some practitioners are using adaptation frameworks; frameworks could be more widely disseminated to inform future adaptation efforts.

- We found heterogeneity and gaps in reporting the reasons and process of adaptation.

- Common taxonomies of adaptation elements are needed to inform reporting of adapted EBIs (types: Stirman et al., 2013; Moore et al., dimensions: fit/timing/valence).
Future Research

- Examine composites of program changes, reasons
- Evaluate adapted EBIs to determine whether these versions are as effective as the original or other adapted versions
- Determine key features or elements re: adaptation to record and standardize across studies
- Consider a clearinghouse for adapted programs to understand the issues around ecological validity of adapted EBIs - Chambers (2016) recommendation for an adaptome (catalog of adapted programs/their results to share with the field)
Questions

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