Implementation Science: An Organizational Perspective

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What is implementation?

- Implementation refers to the courses of action through which an idea, decision, rule, procedure, program, or practice is put into use.

  - Implementation is often, but not always a social process
  - Implementation implies doing
  - “Put into use” preserves focus on initial or early use
  - A key aspect of implementation is organizing
  - Implementation is purposeful, more or less planned
Does implementation matter?

Results from 5 meta-analyses (483 studies)

- DuBois et al (2002): mentoring programs that monitored implementation had effect sizes > 3 times those that didn’t
- Smith et al (2004): anti-bullying programs that monitored implementation had > 2 times effect sizes as those that didn’t
- Tobler (1986): drug prevention programs that were well implemented had effect sizes .34 greater rather than those poorly implemented
- Wilson et al (2003): implementation quality second most important predictor of outcomes in school-based prevention programs (N =221), behind student risk-status
Does implementation matter?

- Derzon et al (2005) meta-analysis:
  - Assessed findings from 46 unpublished drug prevention programs funded by SAMHSA, mean effect size of .02 and half produced negative effect sizes

- Three factors with strongest effects on outcomes (two of which were implementation related)

- Re-estimated study outcomes to adjust for these three factors—asking the “what if” question

- Synthetic projections: mean effects for 46 programs rose from .02 to .24. One program have negative effect size
What are common implementation tasks?

- Equipping people with needed knowledge and skills
- Developing an effective strategy or plan for implementing this change
- Keeping the momentum going in implementing this change
- Holding people accountable for implementing this change
- Coordinating tasks so that implementation goes smoothly
- Getting people involved and invested in implementing this change
- Improvising when problems arise implementing this change
- Managing the politics of implementing this change
What is “successful” implementation?

- Reach
- Dose delivered
- Dose received
- Fidelity

Implementation = reach + dose delivered + dose received + fidelity

Adherence: delivered as designed or written

Coverage: intervention’s reach with intended participants

Dose: amount received by participants (e.g., duration frequency, coverage)

Quality: manner in which intervention is delivered

Participant responsiveness: receptivity, engagement

Differentiation: identifying essential features, or what the CDC calls the core elements of an intervention (Dusenbury et al., 2003)
Can we organize these aspects?

Potential Moderators
- Intervention complexity
- Facilitation strategies
- Delivery quality
- Participant responsiveness

Adherence
- Content
- Coverage
- Frequency
- Duration

Outcomes

What are some facilitation strategies?

- Training and technical assistance
- Rewards, incentives, and recognition
- Persuasive communication
- End-user participation in decision-making
- Workflow or workload changes
- Changes in staffing levels or staffing mix
- New reporting relationships and/or changes in authority structure
- Monitoring and/or enforcement policies or procedures
What do facilitation strategies do?

Adapted from: Weiner BJ, Lewis MA, Linnan LA. Using organization theory to understand the determinants of effective Implementation of worksite health promotion programs. Health Educ Res 2009;24(2);292-305.
Innovation generation (invention)
- Organizational learning theory
- Van de Ven’s work (1999) on the innovation journey

Innovation adoption
- Resource dependence theory and institutional theory
- Oliver’s work (1991) on strategic responses to institutional processes

Innovation implementation
- Organizational learning theory
- Leadership and culture theories
Some useful frameworks


Some interesting questions

- Does organizational readiness to change matter?
- Do organizations that employ learning disciplines or QI approaches (PDSA) implement change faster or better?
- What role do middle managers play in implementation?
- What forms of training and technical assistance are most effective, and under what conditions?
- How do resource dependencies and institutional processes affect implementation?
Some final thoughts

- Implementation usually involves collective, coordinated action
- Facilitation involves more than just training and technical support
- The equifinality principle applies—that is, there is more than one way
- Real-time monitoring and feedback can enhance fidelity

Your thoughts?


