BUILDING IMPLEMENTATION SCIENCE FOR AGRICULTURE, NUTRITION, AND HEALTH

ANH 2019 – in collaboration with Society for Implementation Science in Nutrition

Learning lab presentation

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- Dissertation research: How does the idea of nutrition-sensitivity become practice?
  - Ethiopia's PSNP – ~2013, high-level commitment to reducing undernutrition – re-release of National Nutrition Program with multisectoral support
  - PSNP 4 (2015-2020) would become 'nutrition-sensitive'

- 2014-2016 - Multi-sited fieldwork in Ethiopia (document review, interviews, observations):
  - Characteristics of health and agriculture service delivery systems
  - Perspectives of
    - national and international nutrition, health, and agriculture communities (research and practice);
    - "middlemen:" PSNP implementers (government bureaus of health and agriculture at federal, zone, and woreda level; ag and health specialists/supervisors of ag and health frontline workers)
    - program recipients and their immediate surrounding community
  - Articulation within and between the intended service delivery systems

OUTLINE

- Overview of IS landscape: conceptual framings
  - Case studies in part 2
- Simplified propositions for IS
- Takeaways

PERSPECTIVES ON IMPLEMENTATION SCIENCE

Biomedical	Program/policy	Health systems
Starting point: biomedical/basic science and the need to translate evidence into practice (largely into clinical settings)	**Starting point:** improving implementation of a program or policy	**Starting point:** Health systems – concerned about systems functioning and alignment and articulation of and between different systems
National Institutes of Health: "…the study of methods to promote the adoption and integration of evidence-based practices, interventions and policies into routine health care and public health settings."	**Tumilowicz et al (2018):** "an interdisciplinary body of theory, knowledge, frameworks, tools and approaches whose purpose is to strengthen implementation quality and impact.; identify and address implementation bottlenecks; identify, evaluate and scale up implementation innovations; and strategies to enhance the utilization of existing knowledge, tools and frameworks based on the evolving science of implementation." *(See also Damschroder et al. 2009)*	**World Health Organization:** "…the scientific study of the processes used in the implementation of initiatives **as well as the contextual factors that affect these processes."** - Purpose is to understand how health interventions "work in the real world"

OVERARCHING GOAL OF IMPLEMENTATION SCIENCE

- **Biomedical:**
  - **NIH 2019 Funding Announcement:** "…NIH has recognized that **closing the gap** between biomedical and basic behavioral discovery and population health and healthcare delivery is both a complex challenge and an absolute necessity if we are to ensure that all populations benefit from the Nation's investments in scientific discoveries."
  - **UNC/RTI Consortium for IS:** Implementation science seeks to **close the knowing-doing gap** by systematically generating evidence about how to effectively implement evidence-based programs, practices or policies in clinical or community settings.
- **Programs and policies (Tumilowicz et al):** IS is intended to address the gap in **know-how** for scaling up nutrition interventions to achieve SDGs.
- **Health systems (Theobald et al):** "Implementation research…addresses…the **know–do** gap in real-world settings…

CONTRIBUTIONS OF IMPLEMENTATION SCIENCE

Biomedical (NIH IS Funding Announcement, 2019)

- Identify, understand, and develop strategies for overcoming barriers to the adoption, adaptation, integration, scale-up and sustainability of evidence-based interventions, tools, policies, and guidelines.
- Understand when there is a need to "de-implement" interventions that are ineffective, unproven, low-value, or harmful.

Programs and policies (Tumilowicz et al, 2018)

- Identify and address implementation bottlenecks;
- Identify, evaluate and scale up implementation innovations;
- Strategies to enhance the utilization of existing knowledge, tools and frameworks based on the evolving science of implementation

Health systems: WHO (2013)

- Capture and analyze information in real time to facilitate health systems strengthening
- Help organizations develop the capacity to learn from implementation – iterative process of knowledge generation and use from programming

SO HOW DO WE "DO" IMPLEMENTATION SCIENCE?

- **Agreement:** Question framing is paramount
- **Agreement:** Methods follow questions
- **Agreement:** Demand-driven - collaboration with implementers, end-users, etc from the identification of the need to the articulation of the question to the use or uptake of results is key

PROPOSITIONS FOR A SIMPLIFIED FRAMEWORK FOR IMPLEMENTATION SCIENCE

- Proposition 1:
  Implementation science is distinguished by its aim to learn about implementation.
- Proposition 2:
  Methods derive from and fit with the aims.
- Proposition 3:
  Implementation science is built with experiential learning and tacit knowledge.

PROPOSITION 1:
IMPLEMENTATION SCIENCE IS DISTINGUISHED BY ITS AIM TO LEARN ABOUT IMPLEMENTATION

- Aims to generate the knowledge needed to improve the implementation of an ongoing or future effort
- Does not focus on producing judgments about specific programs or policies, in contrast to evaluation which determines the value or worth of actions
- Leeway to ask questions about implementation that are not limited to making a judgment

EXAMPLES OF BIG QUESTIONS (1)

- How can programming be integrated into and strengthened in existing systems and platforms at national and sub-national levels?
- How can data and implementation learning be used to improve quality and coverage of services?
- What conditions, strategies, and methods are needed to enable country-level scale-up of effective interventions?

Bose, Escobar, Frongillo (2019)

EXAMPLES OF BIG QUESTIONS (2)

- How does one motivate individuals to adopt and sustain behavior change?
- How can the capacity, capabilities, motivation, and performance of frontline workers be improved?
- How can programs be sustained at community, program, and institutional levels?
- How can what is learned in one country be used to improve in other countries in the same region?

Bose, Escobar, Frongillo (2019)

PROPOSITION 2:
METHODS DERIVE FROM AND FIT WITH THE AIMS

- Methods are selected for the aims
- Aims are addressed through a combination of methods
- Including in-depth qualitative methods is important to provide richness from the perspectives of actors involved in implementation

Health systems perspective (WHO):

- Promotes methods that **"generate actionable intelligence, are good at capturing the subtleties of context over time, and offer the iterative flexibility needed to respond to change**."
- Typical IS studies include:
  - Pragmatic trials,
  - Effectiveness–implementation hybrid trials,
  - Quality improvement studies
  - Participatory action research
- *"…it makes little sense to talk in terms of a set of 'implementation research methods…it is the question that determines the method used, rather than the method that determines the kinds of questions asked."*

Biomedical perspective (NIH Implementation and Dissemination Research in Health Program Announcement, 2019)

- "The purpose of [this announcement] is to support innovative **approaches to identifying, understanding, and developing strategies for overcoming barriers to the adoption, adaptation, integration, scale-up and sustainability of evidence-based interventions, tools, policies, and guidelines."**
- May include the following types of studies:
  - Pilot or feasibility studies;
  - Secondary analysis of existing data;
  - Small, self-contained research projects;
  - Development of research methodology; and
  - Development of new research technology.

Eleanor Crook Foundation:

- "The RFA is for implementation research projects designed to **test innovations and delivery mechanisms (in terms of feasibility, acceptability, effectiveness, and/or efficiency) with the potential to increase the effectiveness of nutrition interventions and take them to scale."**
- *"Implementation research does not focus on research for academic purposes."*

PROPOSITION 3:
IMPLEMENTATION SCIENCE IS BUILT WITH EXPERIENTIAL LEARNING AND TACIT KNOWLEDGE.

- Engages multiple stakeholder groups (e.g., practitioners, policy makers, researchers, and communities)
- Stakeholders seek collaborative engagement to do any or all of:
  - Articulate priorities
  - Generate aims and questions
  - Identify data sources and methods to answer questions
  - Determine use of results

- Example: Front-end engagement
  - How to do it:
    - Identify, convene, seek input, reflect on input, incorporate
  - Benefits
    - Refine/identify new questions, scope, stakeholders; set up for targeted dissemination and possible increased likelihood of uptake
  - Tradeoffs
    - Time commitment, labor, and availability–possible need for network building
  - Takeaways?

SUMMARY:
KNOWLEDGE IS GENERATED WITH THE AIM OF IMPROVING IMPLEMENTATION.

Implementation science:

- facilitates collaboration among and between stakeholders
- to articulate and pursue aims
- that capture and use experiential learning and tacit knowledge from stakeholders, systems, providers, and recipients
- through applying a mix of methods suited to the aims
- to generate the learning needed to improve implementation

BUILDING A SCIENCE

- Building IS for agriculture, nutrition, and health is about building a shared space
- Presentation provided an overview of the different perspectives that shape implementation science and laid out simple, cross-cutting propositions for how to ”do” implementation science
- Goal: identify and promote a common language that cuts across the different perspectives so that those who engage in this work can communicate with each other as well as other groups of stakeholders about implementation science.
- Your input at this workshop furthers this goal!

OUTLINE OF LEARNING LAB (1)

1. ~~Introduction and technical overview (40)~~
2. Reactions, Q&A (10)
3. Small-group discussions (30)
   - Generate 3-5 examples of implementation-related challenges you have encountered and identify related learning needs (what it is you would need to know to address these challenges)
4. Share out from small groups and recap (10)

OUTLINE OF WORKSHOP (2)

1. Case studies (40)
   - Rasmi Avula, IFPRI
   - Kenda Cunningham, HKI
2. Reactions, Q&A (10)
3. Small-group discussions of two questions (30)
   - How do we gain the knowledge to be able to improve implementation of actions?
   - How should researchers and practitioners engage in the shared space that implementation science provides?
4. Share out from small groups and recap (10)

REFERENCES

Damschroder LJ, Aron DC, Keith RE, Kirsh SR, Alexander JA, Lowery JC. Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science. Implement Sci. 2009;4.

Eleanor Crook Foundation. 2018-2019 RFA: Rise for Nutrition https://static1.squarespace.com/static/551db914e4b0998e40bbd10d/t/5bc51880f4e1fcd2bcb5fa94/1539643535071/ecf-request-for-applications_Oct2018.pdf

Fogerty International Center (2019). https://www.fic.nih.gov/ResearchTopics/Pages/ImplementationScience.aspx

NIH (2019). Implementation and Dissemination Research in Health Program Announcement. https://grants.nih.gov/grants/guide/pa-files/PAR-19-276.html

Theobald, S., Brandes, N., Gyapong, M., El-Saharty, S., Proctor, E., Diaz, T., Wanji, S., Elloker, S., Raven, J., Elsey, H. and Bharal, S., 2018. Implementation research: new imperatives and opportunities in global health. *The Lancet*, *392*(10160), pp.2214-2228.

Tumilowicz, A., Ruel, M.T., Pelto, G., Pelletier, D., Monterrosa, E.C., Lapping, K., Kraemer, K., De Regil, L.M., Bergeron, G., Arabi, M. and Neufeld, L., 2018. Implementation science in nutrition: concepts and frameworks for an emerging field of science and practice. *Current Developments in Nutrition*, *3*(3), p.nzy080.

WHO/Peters, D. H., Tran, N. T., & Adam, T. (2013). *Implementation research in health: a practical guide*. World Health Organization.