

Contributions of Anthropological Practice in Implementation Science: Reflections on a Scoping Review

Elissa Z Faro, PhD (presenter)

Panelists: Peter Taber, PhD, Aaron T Seaman, PhD, Gemmae M Fix, PhD, Heather
Schacht Reisinger, PhD

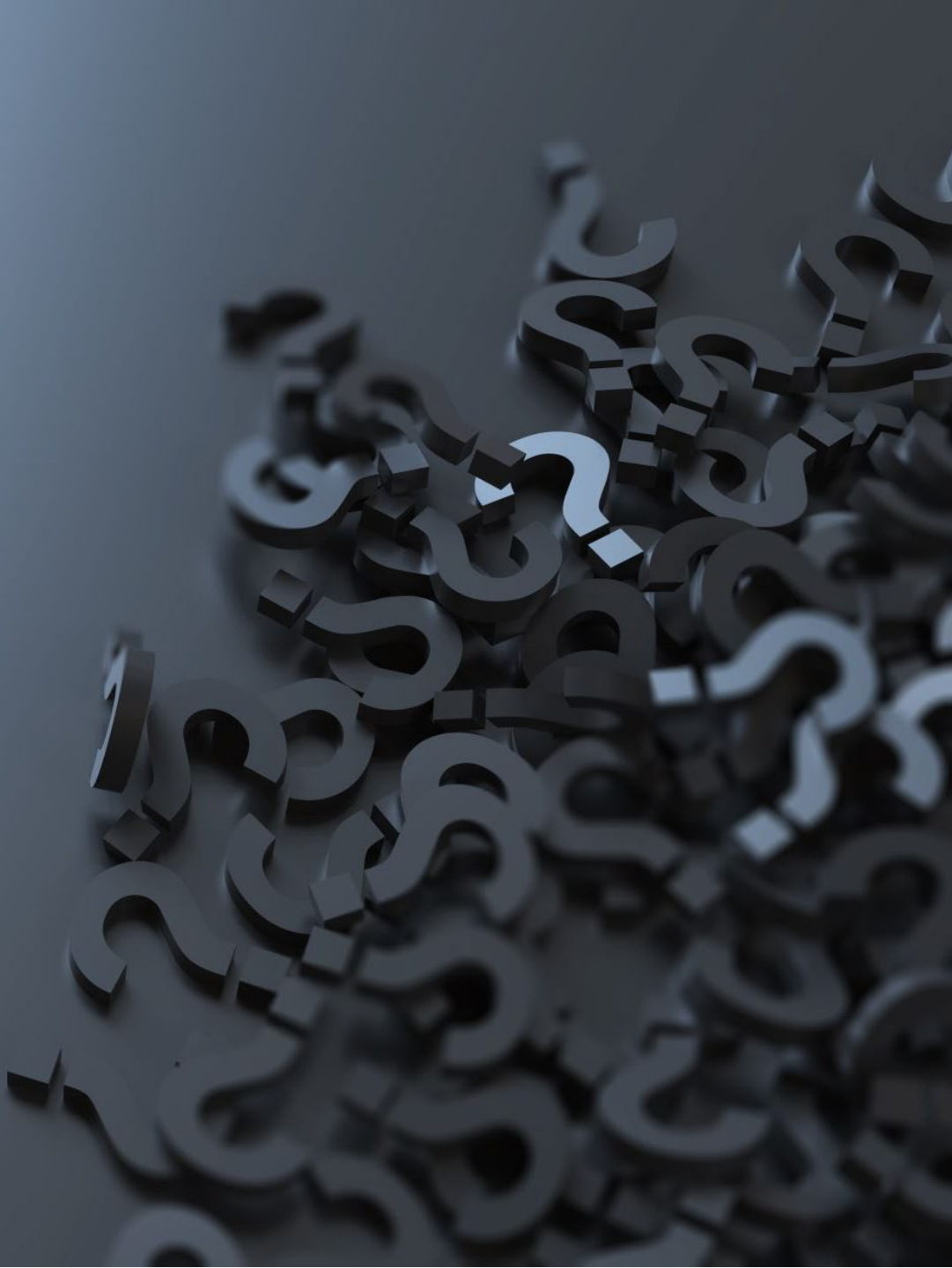
Qualitative Methods Learning Collaborative

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- The contents do not represent the views of the U.S. Department of Veterans Affairs or the U.S. Government
- No conflicts of interest



Poll Question

I consider myself to be (pick all that apply):

- Anthropologist
- Other Social Scientist
- Implementation Researcher
- Implementation Practitioner
- Health Services Researcher
- Clinician
- Operations
- Something else

Poll Question

I have used ethnographic approaches:

- Yes
- No
- I plan to
- I'm not sure



Learning Objectives



Get a sense of the findings of our recent scoping review of the use of anthropological practice in implementation science



Reflect on the process of reflexively and iteratively exploring how, why, and by whom anthropological practice is represented in the implementation literature



Think through considerations for researchers trained in diverse traditions about their theoretical and methodological contributions to an interdisciplinary field like implementation science

Overview



Background



Methods



Results



Discussion



Concluding Thoughts

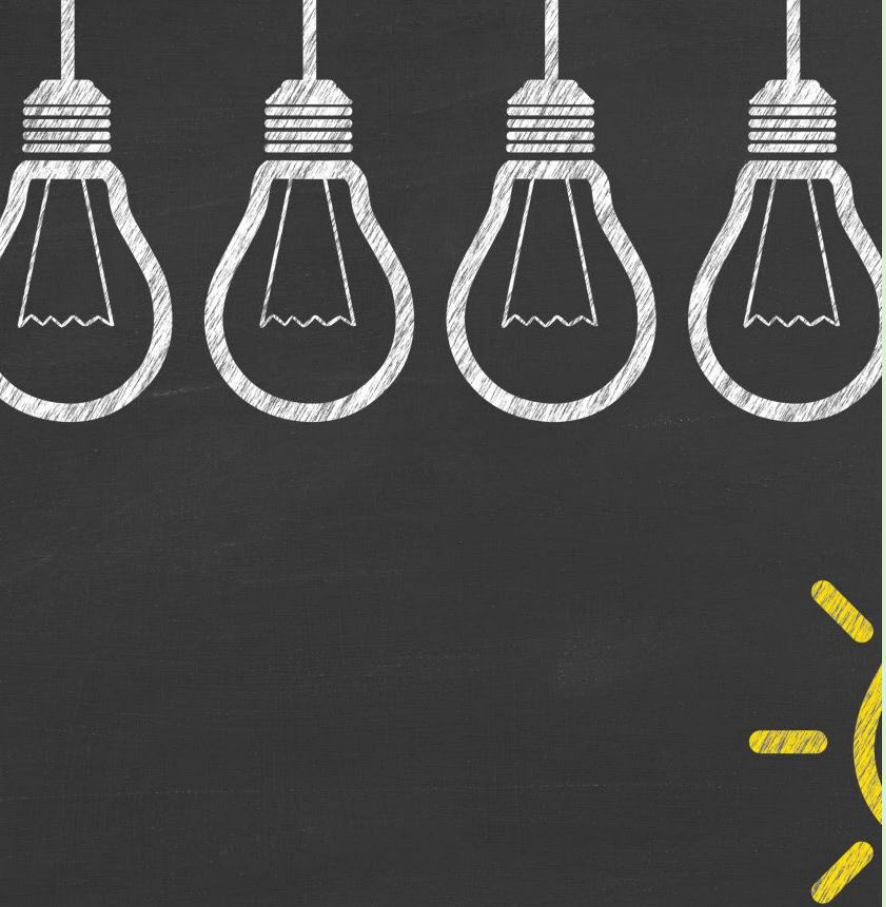
The image features a complex marbled paper pattern. The design consists of intricate, swirling veins of deep red, forest green, and black, set against a dark, almost black background. The colors are layered and blended, creating a rich, organic texture. The word "Background" is printed in a clean, white, sans-serif font in the lower-left quadrant of the image.

Background



The Scoping Review Team

Six doctorally-trained four-field anthropologists



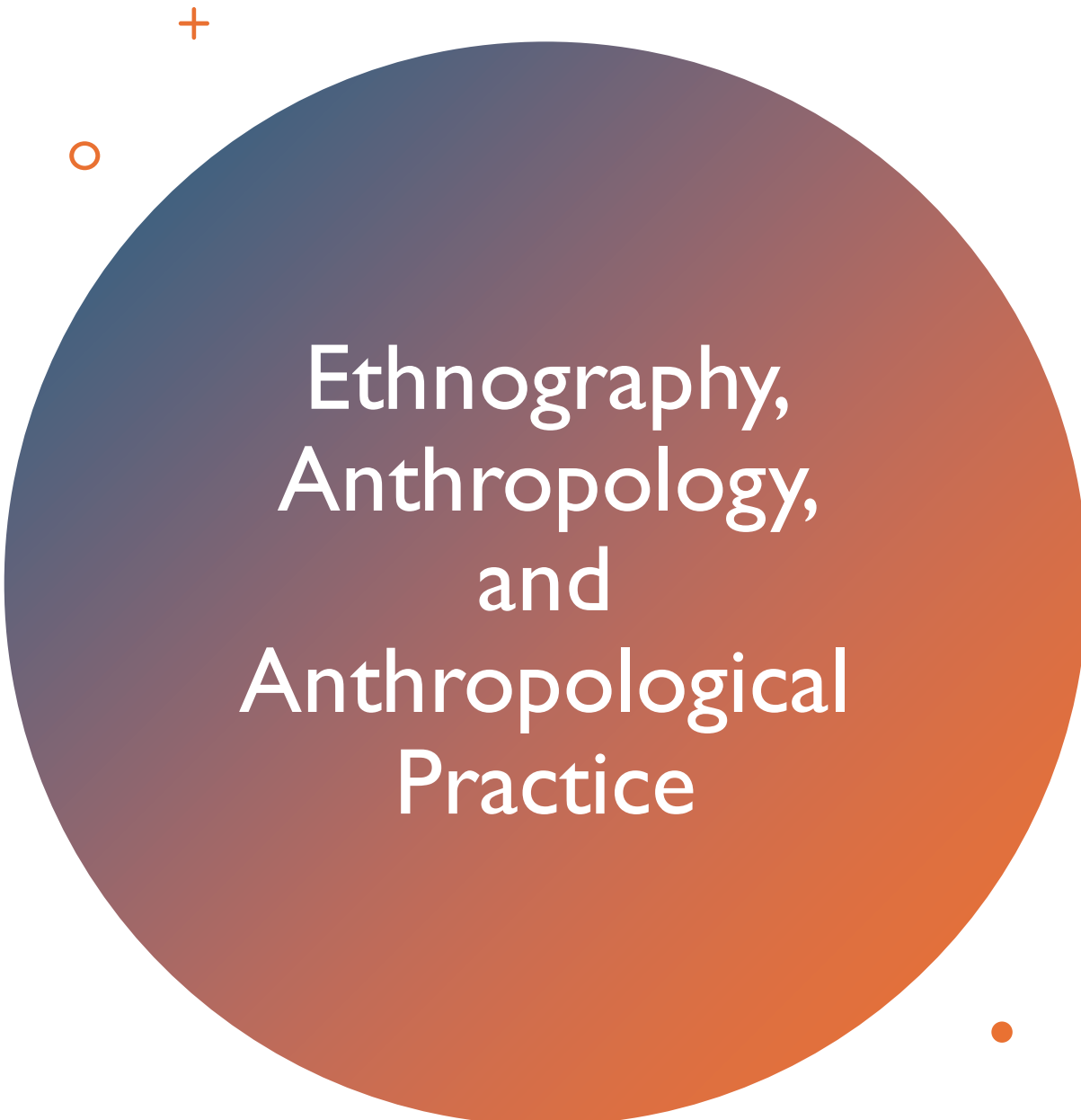
Context

- Implementation Science draws together many disciplines and approaches (each with their own rich history)
- Benefit from ongoing dialogue about cross-disciplinary theoretical and methodological adoptions and adaptations
- Recent work exploring contributions of other fields to IS, specifically two scoping reviews on “ethnography” (Gertner et al) in IS and qualitative methods in IS (Hagaman et al)

Gertner AK, Franklin J, Roth I, Cruden GH, Haley AD, Finley EP, et al. A scoping review of the use of ethnographic approaches in implementation research and recommendations for reporting. *Implementation Research and Practice*. 2021;2.
Hagaman, Ashley, et al. "How are qualitative methods used in implementation science research? A scoping review protocol." *JBI Evidence Synthesis* 19.6 (2021): 1344-1353.

Research Question

We sought to characterize how the implementation science literature describes **anthropological practice** broadly, including the **explicit use of methods such as ethnography (Gertner et al)**; in comparison and contrast to **the suite of qualitative methodological approaches (Hagaman et al)**; and in the more *implicit, epistemological approaches to understanding how people see the world and make sense of their actions in it.*



Ethnography, Anthropology, and Anthropological Practice

Ethnography as an amorphous but distinct combination of epistemology, theory, and methods

Anthropology's approach to learning *from* people and fieldwork as being *with* rather than being *there*

Anthropological practice is “the total context whereby the researcher acquires knowledge through experience” (Okely; p5).

Lederman R. Anthropology's comparative value(s). *American Ethnologist*. 2023;1-7.

Ingold T. Anthropology is good. *American Ethnologist*. 2023;1-3.

Okely J. *Anthropological practice: Fieldwork and the ethnographic method*: Routledge; 2020.

Methods

$$y = g(x)$$

Secant
Lines

Tangent
Line

$x+h$

$$f'(x) = \lim_{h \rightarrow 0} \frac{f(x+h) - f(x)}{h}$$

$$f(x) = \lim_{h \rightarrow 0} \frac{(x+h)^2 - x^2}{h}$$

$$= \lim_{h \rightarrow 0} \frac{x^2 + 2xh + h^2 - x^2}{h}$$

$$= \lim_{h \rightarrow 0} \frac{2xh + h^2}{h}$$

$$= \lim_{h \rightarrow 0} \frac{h}{h(x+h-x)}$$
$$= \lim_{h \rightarrow 0} \frac{1}{x+h-x}$$

$$= \frac{1}{2\sqrt{x}}$$

$$f(x) = \lim_{\Delta x \rightarrow 0} \frac{f(x+\Delta x) - f(x)}{\Delta x}$$

$$f(a) = \lim_{h \rightarrow 0} \frac{f(a+h) - f(a)}{h}$$

Scoping Review Process

We brought a more ethnographic sensibility to the review process

- objectively evaluating published research as “good/included” was intentionally problematized
- to critically examine our assumptions about the world (of reviewed articles) around us

Many iterations of developing and then rejecting definitions of **ethnography** through the process of this scoping review reflected our discomfort with:

- methodological gatekeeping, but also
- the positivist demands for generalizability and reproducibility

PRISMA-SC Workflow Diagram



Identification

Included

Identification of studies via databases and registers

Records identified from*:

Records removed

4566)

Anthropology Plus 9

Records screened total
(n = 3513)
(n = 2449 (2021) + 1152 (2022))

Records (title and abstract)
screened for exclusion
(n = 2449 (1st round only 2021))

Records excluded
(n = 2,026) (1st round only 2021)

Records (title and abstract)
screened for inclusion
(n = 1512)
(n = 423 (2021) + 1152 (2022))

Records excluded**
(n = 1013)
(133 (2021) + 880 (2022))

Reports assessed for eligibility (n
= 487)
(n = 289 (2021) + 198 (2022))

Reports excluded:
(n = 260)
(131 (2021) + 129 (2022))
Not Ethnographic (n = 90)
Theory/Methods (n = 36)
Not Imp Sci (n = 29)
Policy Paper (n = 21)
Not healthcare (n = 15)
Not original research (n = 3)
Not English (n = 1)
Duplicates (n = 5)

Studies included in review
(n = 227)



Data Collection

Screening and Data Extraction

Citation, Title, and Abstract Screening Tool

1. Is the article in English?
2. Is the article original research?
3. Is the article about a health-focused intervention?
4. Is it an abstract, or protocol, methods, review, or policy paper?
5. Is it operationally “ethnographic” (“anthropology” or “ethnography” specifically mentioned OR some combination of: multiple methods (NOT including unrelated I QUAL + I QUANT), theoretical/methodological, field notes, observation, triangulation, ethnography, immersion crystallization, site visits, comparative study, multiple perspectives, in situ, iterative, longitudinal, participatory, reflexivity)?
6. Is it operationally “implementation science” (“implementation science/research” or “knowledge translation” specifically mentioned OR some combination of an IS theory/model/framework, stage of implementation (preparation, implementation, etc.), implementation outcomes, potentially facilitator/barriers with something else)?
7. Is there another reason it shouldn’t be included?
8. If title/abstract passes all of the above, **include for full review**

Data Extraction Tool (30 fields)

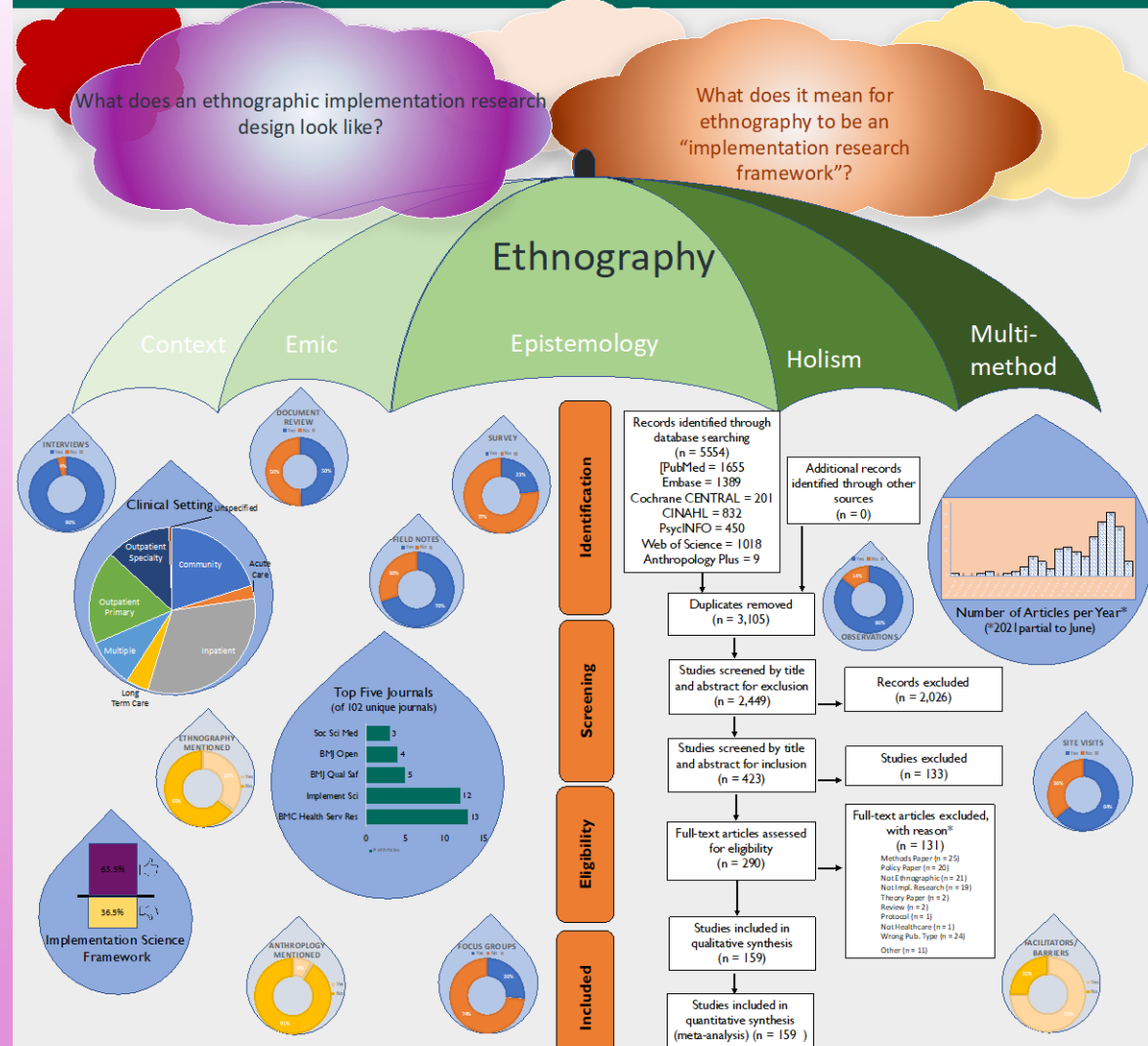
PMID, Author, Year, Title, Journal

- Ethnography, Anthropology, Standard ImpSci Outcomes, Facilitators/Barriers, Interrater Agreement
- Intervention Focus, Manuscript Objective, Target Population, Clinical Setting, Country
- ImpSci TMF, Name of TMF
- Overall Study Design
- Data Collection Methods: Observation, Field Notes, Site Visits, Focus Group Discussions, Interviews, Document Review, Survey, Other
- Overall Analytic Design
- Analytic Methods and Reporting: Thematic Analysis (y/n), Thematic Analysis (describe), Use of Field Notes (y/n), Field Notes (describe), Interview Quotations, Survey Results, Other Analysis/Results
- Comments



Feedback from Colleagues

- Society for Applied Anthropology in spring 2022
 - Full team panel discussion
- Society for Implementation Research Collaboration fall 2022
 - EZF presented poster



Preliminary Conclusions:

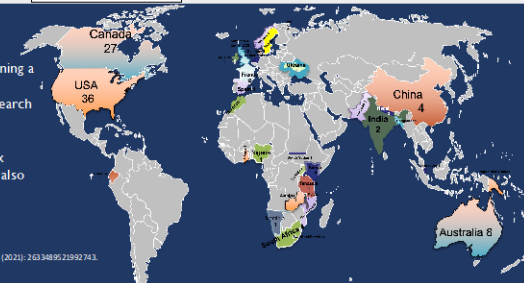
Building on Gertner et al.'s 2021 scoping review that searched the term "ethnography" in implementation science and produced important information, only 35% of the articles we reviewed included that term

- At the same time, a more inductive scoping review led to us the conclusion that what is critical to defining a study as ethnographic is not operationalizable (in a way that can be found in abstracts)
- The number of researchers doing multimethod (e.g., more complex, integrated, layered) qualitative research in implementation research is rapidly increasing
- ex. Articles reporting any observation as data collection increased by 60% over search period

As the field of implementation science grows and its theories, models, and frameworks get more complex (reflecting real world conditions), the design of the suite of methods to appropriately capture them must also do so; an ethnographic approach is ideal for designing studies that capture the breadth and depth true implementation research requires.

We suggest that ethnography is an epistemology that can inform implementation research

References:
 Gertner, Alex K., et al. "A scoping review of the use of ethnographic approaches in implementation research and recommendations for reporting." *Implementation research and practice* 2 (2021): 2.0334895.21992743.
 Acknowledgements:
 We'd like to thank Heather Mealy, Clinical Education Librarian, Hardin Library, University of Iowa, and Natalie Swanson, University of Iowa, MSTP-SUMR Program



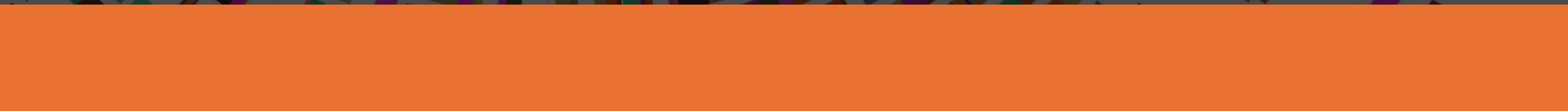
Reflexive approach to full-text extraction

- Iterative development of our data extraction worksheet was iterative based on our multiple rounds of piloting, review, and discussion
- A priori decisions on what to capture and how to standardize were challenging
- The more we read, the more our opinions changed
- We decided to describe in terms as close to how the manuscripts presented their own work as possible
- An ethnographic approach where we learned from the research itself:
 - less strict definitions and, ultimately,
 - less reproducibility





Data Analysis



Analyses

- Descriptive Statistics
- Cochran-Armitage Trend Test
- Bibliometric
 - Scopus
 - SciVal
- Network
 - VOSViewer



Scopus

Home > Products > Scopus

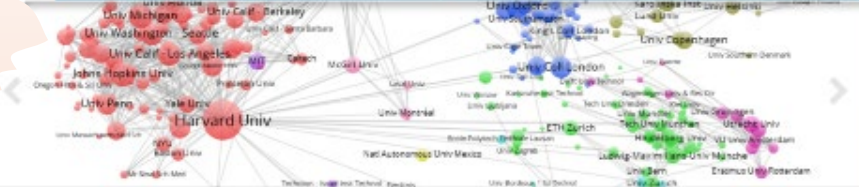
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 - Analyze & understand the actual bibliometrics used in THE World University Rankings

Contact us

The background features a complex, abstract geometric pattern. It consists of numerous 3D cubes and hexagonal shapes arranged in a non-uniform, overlapping manner. The colors used include bright green, dark green, olive green, brown, tan, light pink, and grey. The lighting is soft, creating subtle gradients and shadows that give the shapes a three-dimensional appearance. The overall composition is dynamic and modern.

Results

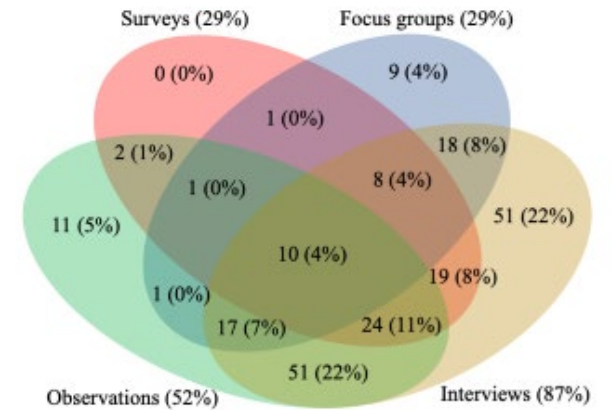
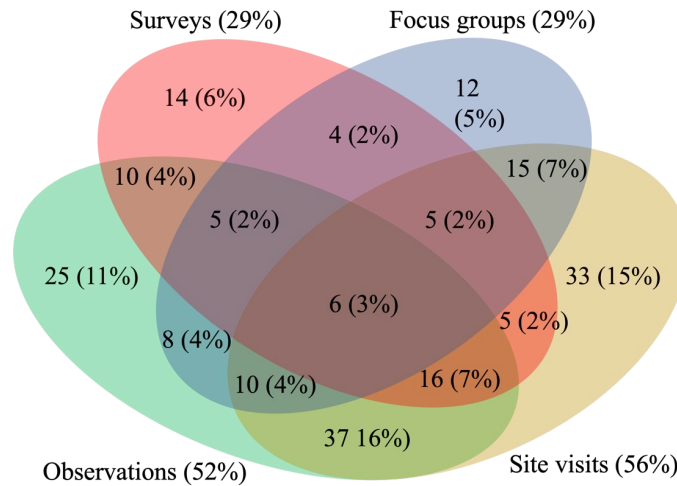
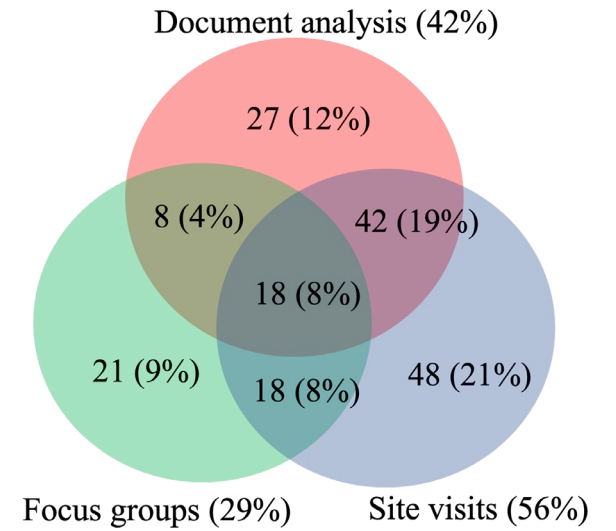
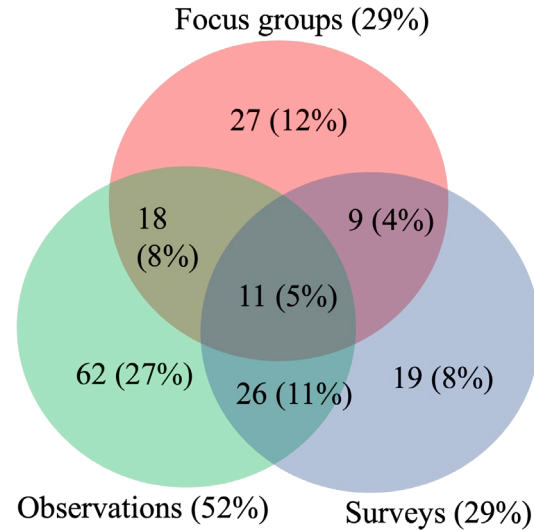
Characteristics of Included Articles

Characteristic	Number of Studies
Anthro/ethno methods	
Use of term “ethnography”	73
Use of term “anthropology”	18
Interrater reliability	11
Data Collection	
Observation	118
Field Notes	134
Site Visits	127
Focus Groups	65
Interviews	198
Document Review	96
Survey	65
Other	181
Average # of Methods	3.5
Used ≥ 5 methods	49 (only 1 used 7)
Data Analysis	
Thematic Analysis	192
Field Notes	123
Interview Quotations	194
Survey Results	60
Other	100
Overall Design?	
Ethnographic	30
Participatory	9
Mixed/multi- methods	67
Evaluation	33
Qualitative	8
Case Study	46

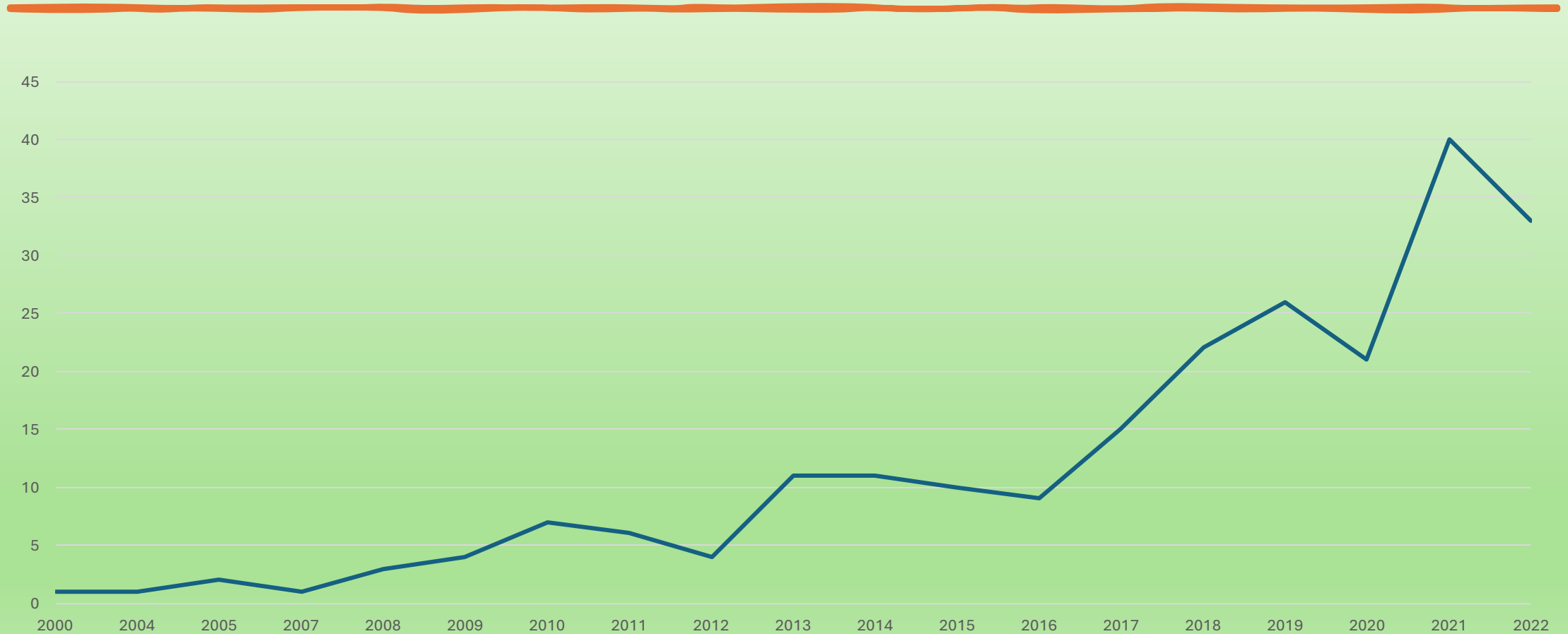
Characteristic	Number of Studies
IS methods	
Standard IS outcomes	146
Use terms facilitators or barriers	159
Use implementation TMF?	144
CFIR	49
PARIHS/iPARIHS	13
PRECEDE-PROCEED	3
RE-AIM	4
Context	
Clinical Setting	
Inpatient	62
Community	56
Outpatient (primary)	43
Outpatient (specialty)	32
Long term Care	8
Emergency	7
Multiple	17
Unspecified	2
Country (Top 5)	
United States	54
Canada	33
England	29
Australia	18
Sweden/China/Denmark	6

Data Collection Methods

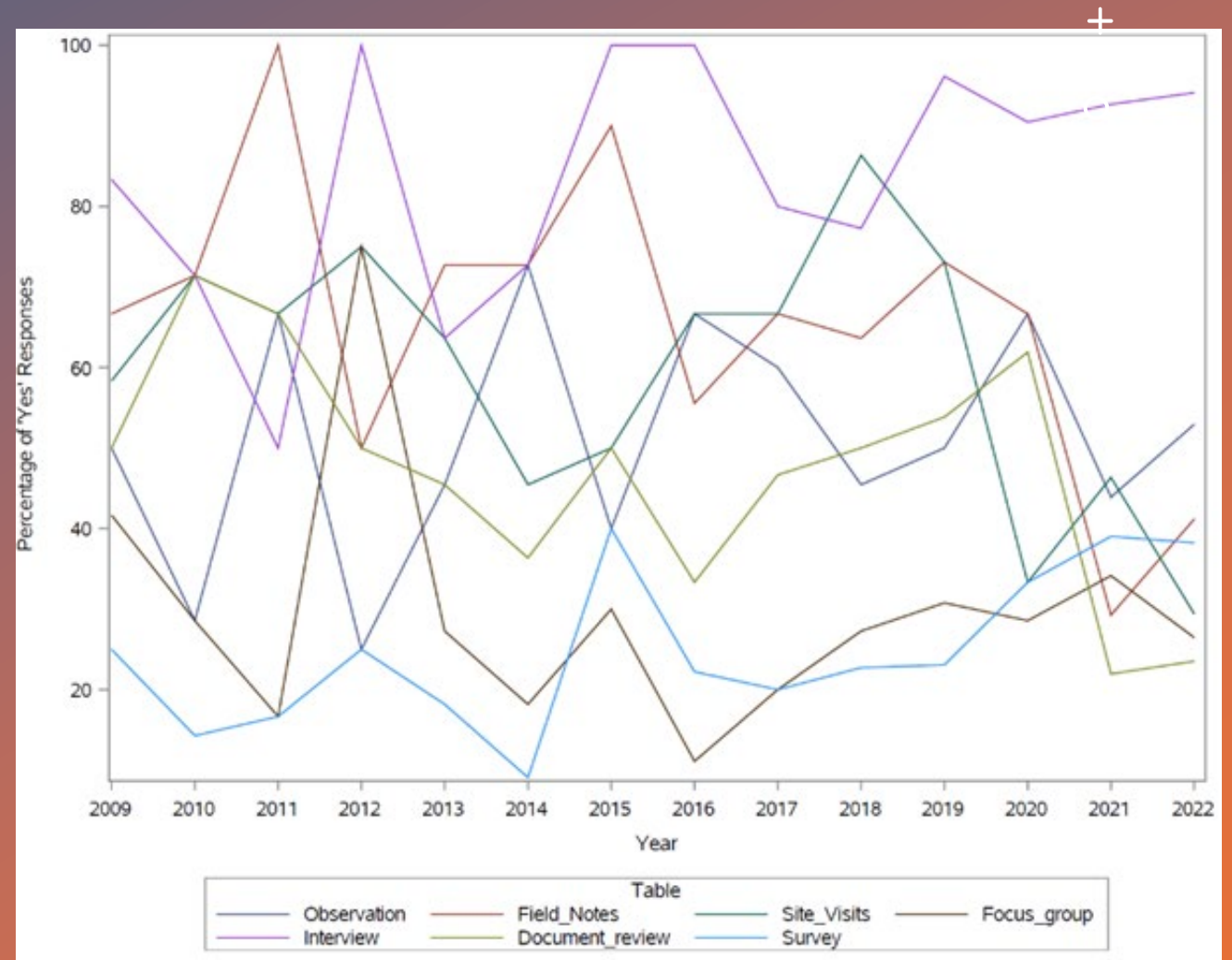
Co-occurrence of data collection methods



Number of articles included by year



Frequency of Data Collection Methods over Time



Does context matter?

Implementation research

- Facilitators and barriers
- Standard implementation outcomes
- Implementation theory, model, and framework

Clinical context

Country

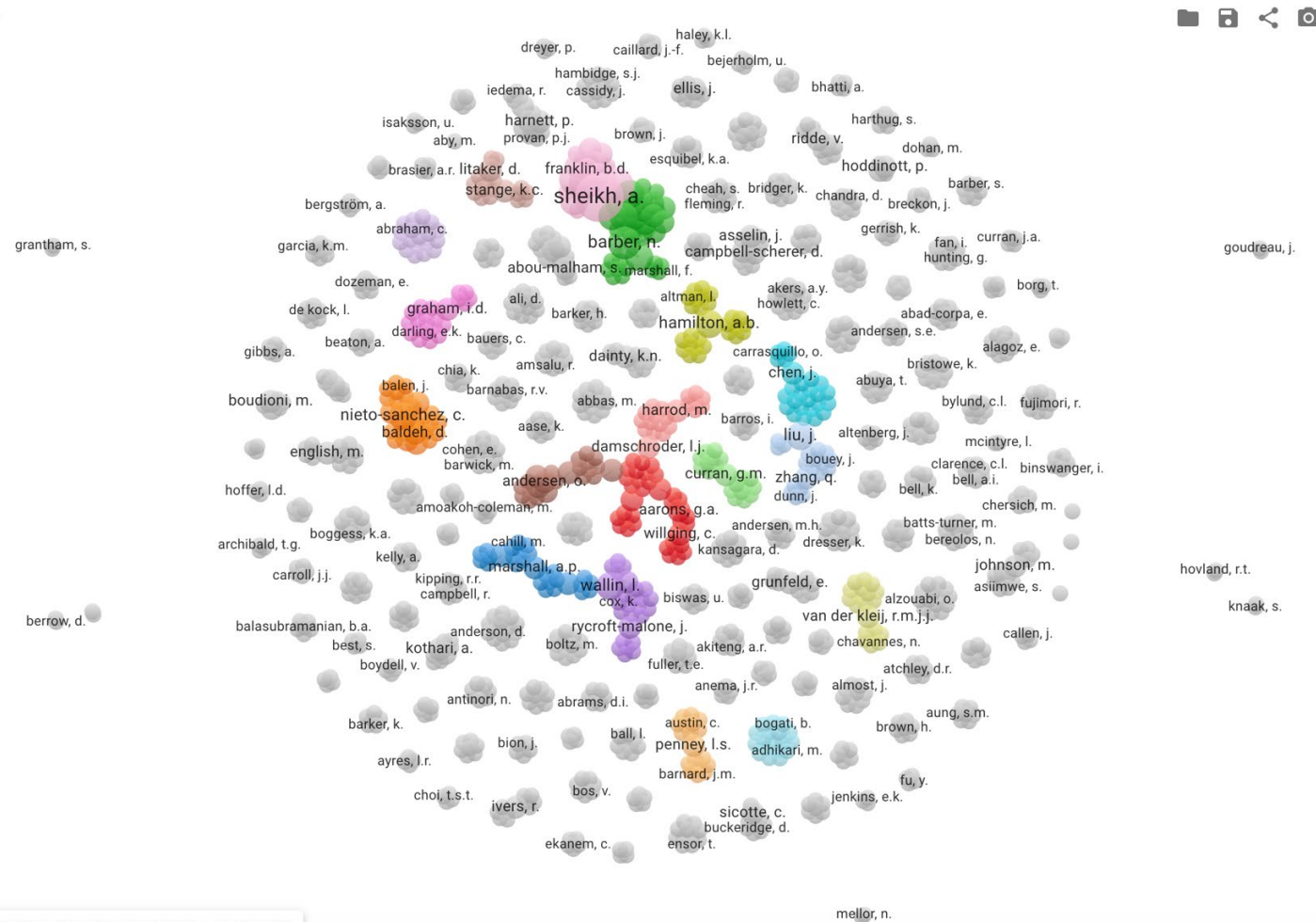


Whose Voice? Cluster Density Visualization

VOSviewer



Items: 1468 | Links: 6046 | Total link strength: 6337 | Clusters: 174



Details of Top 15 Authors in the VOSViewer Cluster Density Visualization

Author	Links	Total Link Strength	Documents	Clusters	Discipline
Sheihk, A	37	78	9	18	Medicine/Epidemiology
Barber, N	29	50	4	2	Pharmacy
Liu, J	35	35	3	12	Public Health
Nieto-Sanchez, C.	24	32	3	7	Medical Anthropology
Damschroder, L.	28	28	2	10	Public Health
Chen, J	26	26	2	6	Computer & Information Science
Hamilton, A	26	26	3	4	Anthropology
Wallin, L.	25	26	3	5	Nursing
Rycroft-Malone, J	21	21	2	5	Nursing/Psychology
Graham, I.D.	21	21	2	9	Medical Sociology
Harrod, M	20	20	2	10	Anthropology
Van der Kleij, R.	19	19	2	13	Psychology
Curran, G.	19	19	2	11	Medical Sociology
Penney, L.S.	17	17	2	16	Anthropology
Anderson, B. O	12	15	2	8	Medicine



Discussion

Related Scoping Reviews

Gertner, Alex K., Joshua Franklin, Isabel Roth, Gracelyn H. Cruden, Amber D. Haley, Erin P. Finley, Alison B. Hamilton, Lawrence A. Palinkas, and Byron J. Powell. "A scoping review of the use of ethnographic approaches in implementation research and recommendations for reporting." *Implementation research and practice* 2 (2021): 2633489521992743.

Hagaman, Ashley, Elizabeth C. Rhodes, Kate Nyhan, Marina Katague, Anna Schwartz, and Donna Spiegelman. "How are qualitative methods used in implementation science research? A scoping review protocol." *JBI Evidence Synthesis* 19, no. 6 (2021): 1344-1353.



Tensions with the Scoping Review Process

- Our process reflected our team's decisions, identities, and relationships with implementation science and our prioritization to remain as close to the text as possible
 - Both processes and the results produced reflect the tension between concerns of perceived methodological protectionism, while also wanting to demonstrate that anthropology is being practiced in implementation science work despite its disciplinary invisibility
 - Constant hesitation to define boundaries and therefore canonize our own interpretations of how ethnography is or should be used in implementation research
-

Anthropological Practice in Implementation Science

- Implementation science reflects complex organizational and behavioral change in diverse and equally complex contexts
- Anthropology is well-suited and essential for implementation research to attend to the power dynamics; intersectional identities and diverse experiences; and embedded, structural, and systemic aspects of health and healthcare of the contexts in which we work
- Given that history and epistemology inform current practice, this large, anthropological infusion likely has implications for how implementation science is practiced especially its attention to context. However, our review points to the challenges of trying to summarize a methodology that is creative and context-specific by nature

Conclusions

- We began to conceptualize our own anthropological practice in our implementation research differently and describe it more explicitly, both in grant proposals and in published manuscripts
- Researchers doing qualitative work in implementation research could think critically about how their work is ethnographic from a methodological and epistemological standpoint to capture the richness of the ethnographic sensibility
- More broadly, researchers doing implementation science might consider interrogating the disciplinary roots of their approach and how that informs all aspects of their work

THANK YOU!

Heather Healy (co-author), Clinical Education Librarian, Hardin Health Sciences Library

Patrick Ten Eyck, Assistant Director for Biostatistics and Research Design, Institute for Clinical and Translational Science

Sara Schieb, Director, Scholarly Impact, University of Iowa Libraries HSS/Scholarly Impact

Wei Xei, Data Analyst, HSS/Scholarly Impact