Review

Implementation
Research & Practice

A scoping review of the use of ethnographic approaches in implementation research and recommendations for reporting

Alex K Gertner[1] (ID), Joshua Franklin[2], Isabel Roth[3],
Gracelyn H Cruden[4] (ID), Amber D Haley[1], Erin P Finley[5],
Alison B Hamilton[5,6], Lawrence A Palinkas[7]
and Byron J Powell[8] (ID)

Abstract

Background: Researchers have argued for the value of ethnographic approaches to implementation science (IS). The contested meanings of ethnography pose challenges and possibilities to its use in IS. The goal of this study was to identify sources of commonality and variation, and to distill a set of recommendations for reporting ethnographic approaches in IS.

Methods: We included in our scoping review English-language academic journal articles meeting two criteria: (1) IS articles in the healthcare field and (2) articles that described their approach as ethnographic. In March 2019, we implemented our search criteria in four academic databases and one academic journal. Abstracts were screened for inclusion by at least two authors. We iteratively develop a codebook for full-text analysis and double-coded included articles. We summarized the findings and developed reporting recommendations through discussion.

Results: Of the 210 articles whose abstracts were screened, 73 were included in full-text analysis. The number of articles increased in recent years. Ethnographic approaches were used within a wide variety of theoretical approaches and research designs. Articles primarily described using interviews and observational methods as part of their ethnographic approaches, though numerous other methods were also employed. The most cited rationales for using ethnographic approaches were to capture context-specific phenomena, understand insiders' perspective, and study complex interactions. In reporting on ethnographic approaches, we recommend that researchers provide information on researcher training and position, reflect on researchers' positionality, describe observational methods in detail, and report results from all the methods used.

Conclusion: The number of IS studies using ethnography has increased in recent years. Ethnography holds great potential for contributing further to IS, particularly to studying implementation strategy mechanisms and understanding complex adaptive systems.

[1]Department of Health Policy and Management, Gillings School of Global Public Health, University of North Carolina at Chapel Hill, Chapel Hill, NC, USA

[2]Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA, USA

[3]Department of Physical Medicine and Rehabilitation, Program on Integrative Medicine, UNC School of Medicine, Chapel Hill, NC, USA

[4]Oregon Social Learning Center, Eugene, OR, USA

[5]VA Center for the Study of Healthcare Innovation, Implementation & Policy, VA Greater Los Angeles Healthcare System, Los Angeles, CA, USA

[6]Department of Psychiatry and Biobehavioral Sciences, David Geffen School of Medicine, University of California Los Angeles, Los Angeles, CA, USA

[7]Department of Children, Youth and Families, University of Southern California, Los Angeles, CA, USA

[8]Brown School and School of Medicine, Washington University in St. Louis, St. Louis, MO, USA

Corresponding author:
Alex K Gertner, Department of Health Policy and Management, Gillings School of Global Public Health, University of North Carolina at Chapel Hill, McGavran-Greenberg Hall CB #7411, Chapel Hill, NC 27599, USA.
Email: alex_gertmer@med.unc.edu

Plain language summary: Researchers have proposed that ethnographic methods may be valuable to implementation research and practice. Ethnographic approaches have their roots in the field of anthropology, but they are now used in many fields. These approaches often involve a researcher spending time in "real-world" settings, conducting interviews and observation to understand a group of people. That said, researchers disagree on the meaning of ethnography, which presents a challenge to its use in implementation science (IS). We searched for articles in the field of IS that described their methods as ethnographic. We then reviewed the articles, looking for similarities and differences in how and why ethnographic approaches were used. Many of these articles said they used ethnographic methods because they were interested in issues like context, research participants' views, and complex interactions. We found a large amount of variation in how ethnographic methods were used. We developed recommendations for describing ethnographic methods in a way that readers can clearly understand. We also made several observations of the value ethnographic approaches can bring to IS. Ethnographic methods may be especially useful to studying unplanned and unexpected changes that take place during implementation. These recommendations and observations could be helpful to implementation researchers wishing to use ethnographic methods.

The field of IS makes use of research methods and frameworks from various scholarly traditions (Bauer et al., 2015; NIH Fogarty International Center, 2018). The field's inclusive methodological ethos facilitates innovation and allows implementation researchers to draw on a diverse research toolset (Bauer et al., 2015; Proctor et al., 2009). However, this methodological breadth can also present a challenge to the interpretation of research, particularly when there is a lack of agreement on common meanings and standards in the use of approaches (Newhouse et al., 2013).

In recent years, researchers have argued for the value of ethnographic approaches in IS. Ethnography distinguishes itself from other approaches in health research by its deep engagement in a small number of cases to produce highly detailed data, its focus on human interaction in everyday environments to capture data outside of formal research processes, and its emphasis on building relationships with participants to access insiders' perspectives, referred to as the "emic" viewpoint (Reeves et al., 2008). These features are potentially well suited to delineating complex implementation processes, revealing contextual factors that affect implementation, and incorporating the perspectives of end-users in implementation, among other benefits (Baumbusch et al., 2018; Bunce et al., 2014; Cohen et al., n.d.; Hamilton & Finley, 2020; Tumilowicz et al., 2015). Implementation researchers have also developed approaches based in ethnography for use in implementation research and practice. Palinkas and Zatzick (2019) developed a rapid approach to clinical ethnography that can be used to understand implementation processes and capture contextual details. Finley and colleagues (2018) proposed a process of periodic reflections based in ethnography for timely development of insights into implementation processes in dynamic contexts. Proposals for the use of ethnographic approaches have also been made more broadly in clinical and healthcare research (Greenhalgh & Swinglehurst, 2011; Huby et al., 2007; Morgan-Trimmer & Wood, 2016; Savage, 2000).

Despite the potential value of ethnographic approaches to IS, differing ideas of what ethnography means present a challenge to their use. Because the meaning of ethnography can vary, it can be difficult to interpret what is meant by use of the terms "ethnography" or "ethnographic" in IS work, and thus to evaluate the rigor and reliability of the approach taken. Modern ethnographic approaches have their roots in anthropology, but what is meant by "ethnography" is contested across and within disciplines (Agar, 2006; Brink & Edgecombe, 2003; Hammersley, 2018; O'Reilly, 2012). Ethnography may refer to a method, such as participant observation, or set of methods, sometimes including quantitative methods. However, it may also be understood as a process involving researcher reflexivity, an epistemological orientation emphasizing interlocutors' perspectives, or a particular research product (Agar, 2006; Clifford & Marcus, 1986; Hammersley, 2018; O'Reilly, 2012).

Given the diverse notions of ethnography, implementation researchers may employ ethnography in different ways. The objective of this scoping review is to examine the uses of ethnography in implementation research. The goal of this study was to identify sources of commonality and variation and distill a set of recommendations for reporting ethnographic approaches in IS.

Methods

Our research team included scholars with expertise in ethnographic methods and IS, including four trained anthropologists (EPF, JF, ABH, LAP). We chose to undertake a scoping review because of the exploratory nature of our research question. We did not seek to assess the quality of

studies, as is typically done in systematic reviews. We followed the approach to scoping reviews delineated by Levac and colleagues (2010). Our primary research questions were as follows: how are ethnographic approaches used in IS, why are they used, and what constitutes ethnographic approaches? In examining what constituted ethnographic approaches, we principally considered what methods were described and how they were used.

Search criteria

We included English-language academic journal articles meeting two criteria: (1) IS articles in the healthcare field and (2) articles that described their approach as ethnographic. For the purposes of conducting searches, we operationalized the first criteria as articles containing the phrases "implementation science," "implementation research," "knowledge translation," or "knowledge to action." We operationalized the second criteria as articles including variants on "ethnography" (search term: "ethnograph*") in the title or abstract. In March 2019, we implemented our search criteria in four academic databases: MEDLINE, Web of Science, EMBASE, and ProQuest Health Management. We also conducted a search in the journal *Implementation Science* for articles that included the term "ethnograph*" anywhere in the article.

Abstract review

Our search produced 210 unique records. Three co-authors (JF, AKG, ADH) screened the abstracts to ensure that they fit our criteria of IS articles in the healthcare field that described their approaches as ethnographic. At this stage, we used Eccles and Mittman's (2006) definition of implementation research: "the scientific study of methods to promote the systematic uptake of research findings and other evidence-based practices into routine practice" (p. 1). We did not require that articles make explicit reference to the IS field to be considered as implementation research.

We included all articles that described their approach as ethnographic but excluded meta-ethnographies (a method of synthesizing qualitative evidence from multiple studies). We included study protocols in our review. Two co-authors screened every abstract. If there was disagreement between the two co-authors, a third co-author broke the tie. We excluded 92 articles that did not describe their approach as ethnographic, 40 articles that were not considered implementation research, and 5 articles that were not health-related. The excluded articles referenced ethnography and IS, which is why they were captured in our search, but these articles did not characterize their own approaches as ethnographic or did not report on implementation research. After abstract review, 73 unique articles remained for full-text review, of which 21 articles were study protocols (see Appendix 1).

Full text analysis

The 73 included articles were published between 2004 and 2019, with 52 (71%) articles published since 2014. The articles were published across 31 academic journals. The most common journals were *Implementation Science, BMC Health Services Research*, and *Social Science & Medicine*.

We iteratively developed a codebook using inductively and deductively developed codes. To understand how ethnographic approaches were used in IS, we coded several article characteristics including characteristics of study design, study objectives, outcome types, and theory, model, or framework (TMF) used (Nilsen, 2015). We coded outcome types as implementation outcomes, service outcomes, and client outcomes following Proctor and colleagues (2011). We developed a simple schema for characterizing articles' objectives: (1) developing tools for implementation research; (2) assessing implementation determinants (e.g., context, barriers, and facilitators); and (3) evaluating implementation strategies. Articles could be classified as having more than one of these objectives.

To understand why ethnographic approaches were used, we coded articles' rationales for use of these approaches. We only coded explicit explanations of why ethnographic approaches were used to minimize subjective inferences. To understand what constituted ethnographic approaches, we documented what methods were used and the descriptions of these methods.

Four co-authors (GHC, JF, AKG, IR) coded the same six articles, iteratively revising codes until there was agreement on coding. The final codes were reviewed by the entire study team. These four co-authors then alternatively paired to double-code each article. Coding pairs first independently coded each article and resolved discrepancies by consensus. Any codes that could not be aligned by paired consensus were resolved by the additional coders. Coders also kept unstructured memos noting observations of interest that were not captured by codes. As such, memos did not produce quantitative results but observations on notable practices and distinctions. After coding, the results were summarized and reviewed by the study team to draw out key insights. Based on these results and reviews of existing recommendations for reporting on the qualitative methods, the study team developed recommendations for clear reporting on ethnographic approaches in IS (Tong et al., 2007).

Results

How are ethnographic approaches used in IS?

To understand how ethnography is deployed in IS, we documented the characteristics of IS articles that used ethnographic approaches. Of the 73 articles included, 32 (44%) articles did not report using a specific TMF (Table 1). The

Table 1. Characteristics of articles using ethnographic methods in IS.

Characteristics	Number of studies (%)
Theory, model, or framework	
None	32 (44%)
CFIR	6 (8.2%)
PARiHS	5 (6.8%)
RE-AIM	5 (6.8%)
Diffusion of innovation	4 (5.5%)
Study type	
Assessing determinants	64 (88%)
Testing strategies	20 (27%)
Developing tools/methods	11 (15%)
Outcome type	
Implementation	72 (99%)
Service	14 (19%)
Client	14 (19%)
Approach	
Multi- or mixed methods	43 (59%)
Hybrid	10 (14%)
Non-hybrid, qual only	30 (41%)
Setting	
Healthcare	62 (85%)
Community	16 (22%)
Other	3 (4.1%)
Participants	
Providers	66 (90%)
Administrators	40 (55%)
Staff	35 (48%)
Patients and families	30 (41%)
Other	11 (15%)

IS: implementation science; CFIR: Consolidated Framework for Implementation Research; PARiHS: Promoting Action on Research Implementation in Health Services; RE-AIM: Reach, Effectiveness, Adoption, Implementation, Maintenance.

remaining articles cited 27 distinct TMFs, with some using multiple approaches. Prominent IS frameworks were the most frequently employed. The most cited TMFs were the Consolidated Framework for Implementation Research (CFIR; Damschroder et al., 2009); Promoting Action on Research Implementation in Health Services (PARiHS; Kitson et al., 2008); Reach, Effectiveness, Adoption, Implementation, Maintenance (RE-AIM; Glasgow et al., 1999); and Diffusion of Innovations (Rogers, 2003).

When it came to articles' objectives, 64 (88%) articles were focused on assessing the determinants of implementation. Some of these articles aimed to better understand contexts in which implementation efforts could take place without seeking to assess a specific intervention. For instance, Charani and colleagues (2017) used observations and interviews to understand how surgical teams made decisions about antibiotic use. Twenty (27%) articles evaluated implementation strategies, nearly all using multi- or mixed-methods approaches. Sax and colleagues (2013)

described a protocol for a mixed-methods evaluation of a "work package" of interventions to improve infection control in intensive care units. Eleven (15%) articles developed tools for implementation research. Some of these developed novel methods, as the previously discussed examples led by Palinkas and Zatzick (2019) and Finley and colleagues (2018). Other articles used ethnographic approaches to elaborate theoretical approaches. For example, Jenkins and colleagues (2016) used an approach involving site visits, meetings, and written communication to develop a framework for guiding community-based knowledge translation. Bardosh (2018) used three rapid ethnographic studies to inductively develop a framework for assessing the effectiveness of interventions aimed at neglected tropical diseases.

Seventy-two (99%) articles included implementation outcomes. Many of these sought to identify barriers and facilitators to implementation of interventions in specific contexts. Some articles identified specific implementation outcomes of interest to them. In their study of an innovation to improve dysphagia care, which employed a mixed-methods approach that included use of an "ethnographic field journal," Ilott and colleagues (2013) clearly identified "adoption and adaptation" as their primary outcomes of interest. Other articles framed their objectives in terms of capturing a particular point of view or aspect of practice. Dainty and colleagues (2016) used interviews and observation to describe the implementation of a post-cardiac arrest consult team "from the participant perspective." Boaz and colleagues (2016) examined the roles of patients across several quality improvement projects using interviews, observations, reflective diaries, and document analysis (Boaz et al., 2016). Fifteen (21%) articles included service outcomes. Jacobsen and colleagues (2017) used survey instruments to track person-centeredness of care in nursing homes before and after an educational initiative. Fifteen (21%) articles included client outcomes. Mumtaz and colleagues (2016) described a protocol for evaluating the quality of maternal health services that included interviewing women about their care experiences.

Forty-three articles (59%) reported on multi- or mixed-methods research with 10 (14%) of these reporting on hybrid implementation-effectiveness studies (Anguera et al., 2018; Curran et al., 2012). In memos, coders noted that these studies at times employed ethnographic approaches sequentially and at times concurrently with quantitative methods. Some articles reported qualitative and quantitative findings together, while others referenced quantitative findings published separately. Dorsey and colleagues (2015) used a "rapid ethnographic assessment approach" to inform measurements in a subsequent randomized controlled trial of a psychosocial intervention. Clarke and colleagues (2013) drew upon interviews, observations, and document review for process evaluation of a stroke care training intervention. Both articles reported

on results of ethnographic approaches separately from quantitative trial results.

Sixty-two (85%) articles described studies in healthcare settings and 22 (30%) in other settings, including homes, places of worship, and social service offices. Sixty-six (90%) articles included clinical providers as participants. Of these, 55 (75%) also included other types of participants, most often administrators and non-clinical staff. Thirty (41%) articles involved patients or their families. In memos, coders noted that articles generally presented settings and participants as planned prior to data collection. By contrast, Shaw and colleagues (2017) described beginning their study of transitional care in a hospital but then following patients into other settings, including patients' homes, as the study progressed.

Why are ethnographic approaches used?

Thirteen (18%) articles did not provide an explicit rationale for the use of ethnographic approaches (Table 2). For the remaining articles, we grouped rationales for ethnographic approaches into six inductively developed categories, which reflected authors' stated intent to understand context-specific phenomena (52 articles, 71%); clarify emic (insiders') perspectives (31 articles, 42%); study complex interactions (28 articles, 38%); examine sociocultural factors (21 articles, 29%); strengthen reliability of findings through use of triangulation (16 articles, 22%); and integrate theoretical models or frameworks (7 articles, 9.6%).

Several studies drew on more than one of these rationales. Bunce and colleagues (2014) discussed the value of an ethnographic approach for process evaluation as "placing the intervention in its historical and social context, 'being there' to document the process as it unfolds and as interpreted by its participants" (p. 2). In their study of knowledge translation strategies to improve spinal care, Webster and colleagues (2014) explained that, through an ethnographic approach, "the cultural norms, local context and specific needs of various professionals can be explicated when building an account of how policymakers, clinicians, and hospital administrators interact" (p. 2). Dixon-Woods and colleagues (2012) succinctly explained multiple rationales for their ethnographic approach to studying a patient safety program in British hospitals:

> Ethnography enables detailed, contextualized descriptions of behavior and of how people make sense of the situations in which they live and work and, consequently, why their own actions make sense (Hammersley & Atkinson, 2007). Ethnography is an especially useful approach to studying patient safety, as it provides an opportunity to observe firsthand how events are classified and communicated in particular ways, as well as the social, cultural, and organizational influences on such classificatory work (Bosk, 2003; Waring, 2009). In particular, ethnography enables insights into how professionals in health care settings account for patient safety

Table 2. Description of ethnographic methods in IS.

Outcome	Number of studies (%)
Ethnographic rationale	
None provided	13 (18%)
Context-specific knowledge	52 (71%)
Emic perspective	31 (42%)
Complex system	28 (38%)
Social norms	21 (29%)
Triangulation	16 (22%)
Theory	7 (9.6%)
Researcher description	
No description	40 (55%)
Research position	23 (32%)
Researcher training	22 (30%)
Training and position	12 (16%)
Interviews	
Not used	5 (6.8%)
Semi-structured	45 (62%)
Unspecified	17 (23%)
Formal	16 (22%)
Informal	14 (19%)
Conversation	11 (15%)
Structured	4 (5.5%)
Unstructured	1 (1.4%)
Observation	
Not used	11 (15%)
Participant	20 (27%)
Non-participant	20 (27%)
Unspecified	24 (33%)
Fieldnotes	
Not used	13 (18%)
Unspecified format	55 (75%)
Structured format	5 (6.8%)
Document review	
Not used	30 (41%)
Existing	39 (53%)
Study	15 (21%)
Focus group	
Not used	48 (66%)
Unspecified type	20 (27%)
Semi-structured	4 (5.5%)
Unstructured	1 (1.4%)

IS: implementation science.

> issues (Bosk, 2003) in ways that other methods may not detect. (p. 554–555)

Several studies applied ethnographic approaches to reveal processes by which implementation strategies worked or failed to work at specific sites. These studies emphasized the value of ethnography for the study of context and complex systems. Drew and colleagues (2019) used an ethnographic approach to understand divergences in client and implementation outcomes across different hospitals as part of an initiative improve hip and knee

replacement surgery in the United Kingdom. McCullough and colleagues (2015) used semi-structured interviews and observations to understand how contextual factors affected differential uptake of evidence-based anticoagulation practices across clinics in a network.

Some studies used ethnographic approaches to mobilize, legitimize, or formalize experiences of researchers and practitioners working in implementation efforts. These studies emphasized the value of ethnography for the study of complex systems and emic perspectives. Reflecting on their role as applied anthropologists working in a program to provide mental health crisis services in New York City, Pope and colleagues (2016) argued that "ethnographically based qualitative research might be used to convert the 'noise' of actual implementation process into information with instructive power (Hohmann & Shear, 2002; Rapkin & Trickett, 2005)" (p. 508). English and colleagues (2011) made a similar proposal as they drew on their own experiences to reflect on why an implementation strategy to improve pediatric hospital services in Kenya produced variable effects. Finley and colleagues (2018) formalized this potential of ethnographic approaches to provide knowledge and insights on implementation efforts as they unfold by developing a procedure for guided discussion.

What constitutes ethnographic approaches?

Articles generally described using a distinct set of methods that constituted their ethnographic approaches, primarily interviews and observation. However, we noted substantial diversity in how methods were described. In particular, the meaning of "ethnographic" was not always articulated.

Sixty-eight (93%) articles used interviews as a part of their methods (Table 2). Forty-five (62%) articles described interviews as semi-structured, four (5.5%) as structured, and one (1.3%) as unstructured. Sixteen (22%) articles described interviews as formal and 14 (19%) as informal. Eleven (15%) articles described using conversations as part of their methods. Seventeen (23%) articles used interviews without describing the type of interview conducted.

In memos, coders noted variation in the level of detail with which articles described interviews or explained how interviews contributed to an ethnographic approach. Sobo and colleagues (2008) used semi-structured interviews as a part of their "focused ethnographic assessment" of an HIV testing intervention for US veterans. They explicitly described what was meant by their "ethnographic" interview approach:

> Interviewers adopted techniques designed to elicit information that interviewees themselves deemed important and to expose understandings existing below any official discourse (Campbell & Gregor, 2004). For example, interviewers adopted an "interested listener" rather than a dictatorial role (Quinn, 2005, p. 41). They sought to avoid collusive conversational turn-taking

and gapfilling in which implicit meanings are assumed to be shared (Campbell & Gregor, 2004). (p. 445)

Sixty-two (85%) articles described using observation as part of their methods. Of these, 20 (27%) described observation as participant, 20 (27%) as non-participant, and 24 (33%) did not specify. As with interviews, coders noted in memos variation in the level of detail with which observational methods were described. In several articles, the only mention of an ethnographic approach was to describe the use of "ethnographic observations" without elaborating on what this meant. By contrast, Latif and colleagues specified the constructs and variables researchers attempted to document through observations in their study of an intervention to improve patient adherence across pharmacies in England. They also provided an explanation of how observation contributed to their ethnographic approach: "Through first-hand observation and direct engagement, organizational ethnography offered an in-depth or 'thick' description of the social, through which analysis of the social-cultural and organizing context was possible" (p. 969).

Many articles described use of fieldnotes in conjunction with observation. In all, 60 (82%) articles described using fieldnotes. Some articles merely noted that fieldnotes were used, while others described the contents of fieldnotes and how they were used. In a protocol for the study of the implementation of a federal Canadian mental health strategy, Park and colleagues (2015) described how trained observers would keep fieldnotes of events such as team meetings that would capture contextual factors and personal interactions. They also described how observers and other research team members would reflect on fieldnotes as part of their planned data analysis.

A variety of other methods were also used as part of ethnographic approaches. Forty-three (59%) articles described analyzing documents as part of their methods. These primarily involved reviewing existing documents from study sites, such as written communications and protocols. Twenty-five (34%) studies used focus groups. Other methods were used less frequently. Zobrist and colleagues (2017) used cognitive mapping in their study of young child feeding interventions in Senegal. Patel and colleagues (2014) described a plan to use video ethnography in their study protocol for an initiative to improve cardiovascular risk management in primary care clinics.

Articles generally provided little information on researchers' training and positionality (role and social position in relation to participants) as part ethnographic approaches. Forty (55%) articles did not provide any description of the researchers involved in ethnographic data collection. Only 12 (16%) of articles mentioned researchers' training in use of ethnographic methods and relationship to the study's setting. When descriptions were provided, they were often minimal. By contrast, Dlamini-Simelane and Moyer (2017) detailed Dlamini-Simelane's

Table 3. Recommendation for reporting on ethnographic approaches in implementation research.

COREQ domains	Recommendations for ethnographic approaches
Research team and reflexivity	• Provide information on researchers' experience and training in ethnographic methods • Clarify which researchers participated in data collection and to what extent • Provide detailed information on researchers' position with respect to research site and participants • Report on how researchers presented themselves to participants, including measures taken to earn participants' trust
Study design	• Consider whether describing approach as ethnographic adds clarity or confusion • Explain what is meant by ethnographic approach and why it is used • Consider employing and referencing specific approaches to rapid or focused ethnography if appropriate • Provide detail on how observational methods were employed, including their goals and who employed them • Report on relevant informal and unstructured activities • Report on how approach evolved during course of study
Analysis and findings	• Describe results from all methods used, including observational • Explicit data coding is not required but an approach to theme identification should be described • Explicitly incorporate reflexivity in analysis • Consider sociohistorical context in results and analysis if appropriate

COREQ: Consolidated Criteria for Reporting Qualitative Research.

participation as an HIV counselor as part of data collection for their study of nurse-led HIV treatment in Swaziland, reflecting on the insights that could be gained in this role.

There was lack of clarity in how long researchers were engaged in data collection. Fifty-six (77%) articles provided some information on study duration. However, there was substantial variation in how duration was reported. Some studies reported the start and end dates of data collection, while others reported number of site visits or hours of observations performed. Of the studies reporting on length of data collection, the shortest period was 2 weeks and the longest was 5 years (Bunce et al., 2014; Dorsey et al., 2015).

Coders noted in memos that studies primarily described results from interviews, less often describing results from observational methods, such as descriptions of settings or events. Coders also noted that studies often described results without referencing larger sociohistorical context or reflecting on the positionality of researcher regarding the research subject, in contrast to how ethnographic results are often presented in social science fields. One exception was Dixon-Woods and colleagues' (2012) study of a program to reduce catheter-related infections in British hospitals. These researchers provided detailed descriptions of how staff responded to the program, placing these reactions within historical context of the British healthcare system.

With regard to analyzing study results, 64 (88%) articles used some form of data coding to identify themes, at times using formal named approaches (e.g., qualitative content analysis, framework analysis, matrix analysis) and at times describing more ad hoc approaches (i.e., developing themes through reading and discussion without a specific or formal process). Studies that did not use data coding either did not explicitly describe an analytic approach or drew on other approaches to the analysis of ethnographic data. In their study of how nurses use research in a pediatric critical care unit, Scott and colleagues employed Fetterman's two-phase approach to ethnographic analysis involving "making order of data" followed by interpretation (Fetterman, 1998; Scott et al., 2008).

Discussion

Our findings suggest that ethnographic approaches are well-accepted in IS. The number of implementation research articles reporting use of ethnographic approaches has increased substantially in recent years, with many articles published in prominent journals. In addition, the use of ethnographic approaches appears compatible with a wide array of TMFs in IS. Ethnographic approaches can be deployed in a variety of mixed and multi-methods designs, including as a part of hybrid implementation-effectiveness studies.

We found that interviews and observations were the most frequently used methods in the articles we reviewed. However, we noted substantial variation in the detail with which these approaches were described. In some studies, the only mention of ethnography was to describe observations as "ethnographic." This finding suggests "ethnography" is at times used to legitimize observational methods in IS. We also found a few articles reported using informal interviews and conversations. Such informal interactions could reveal valuable insights that are not as easily appreciated in formal interviews.

Ethnographic approaches were primarily used to assess implementation outcomes in healthcare settings. A minority of articles reported data collection with patients or in community settings. This finding is not surprising given that implementation efforts are typically aimed at clinical professionals. That said, ethnographic approaches are well suited for multisite research and capturing perspectives from diverse actors. Ethnographic approaches also allow for incorporation of new sites and participants as studies progress. These may represent underutilized possibilities of ethnographic approaches in IS.

The leading reasons given for using ethnographic approaches among the included articles were studying context-specific phenomena, capturing emic perspectives, and studying complex interactions. These rationales are consistent with proposals for the use of ethnographic methods in healthcare research (Huby et al., 2007; Savage, 2000). In particular, we noted that ethnographic approaches were used to detail implementation processes and formalize the experience of individuals involved in implementation as research results.

The rationales for use of ethnographic approaches in IS suggest that collaborative approaches to ethnography may be especially valuable for studying adaptations to interventions and implementation strategies (Stirman et al., 2019), "mechanisms" by which implementation strategies succeed or fail (Lewis et al., 2018, 2020; Powell et al., 2019; Zuckerman et al., 2017), and complex adaptive systems (Braithwaite et al., 2018; Reed et al., 2018). The iterative nature of ethnography makes it well-suited to investigating emergent phenomena that are a feature of such systems, especially as interventions and strategies interact with contextual factors.

An additional possible contribution of ethnography to implementation is increased reflexivity and awareness of positionality (Barry et al., 1999; Bikker et al., 2017). There is growing recognition in academic healthcare for the ways systems of oppression (e.g., racism, sexism, and colonialism) operate within and through healthcare institutions (Evans et al., 2020; Horton, 2019; National Academies of Science Engineering and Medicine, 2018). Especially, given that underrepresented minorities are often excluded from academic positions, researchers must critically address their positionality in relation to systems of oppression when conducting research (Association of American Medical Colleges, 2019; Blackstock, 2020; McKay, 2018; Sufrin, 2015).

Some scholars have argued that research is only "ethnographic" if it employs a particular theoretical orientation, not merely a distinct set of methods (Jowsey, 2016; Lambert, 2002; Waring & Jones, 2016). In conducting this review, we did not seek to reconcile tensions between traditional ethnographic approaches and more structured or abbreviated approaches used in health fields. Rather, our intention was to promote clear communication and thoughtful application of ethnographic methods, so that such tensions may be productive sources of critique and innovation, rather than merely sites of discord or misjudgment. Toward that end, we developed reporting recommendations.

Recommendations for reporting

Rather than develop criteria for reporting on ethnographic methods de novo, we sought to build on existing recommendations. The Consolidated Criteria for Reporting Qualitative Research (COREQ) is a checklist intended to improve reporting of qualitative research in health

sciences (Tong et al., 2007). It is the most cited of the EQUATOR Network's key reporting guidelines for qualitative research (Centre for Statistics in Medicine, n.d.). COREQ consists of 32 items separated into three domains: (1) research team and reflexivity, (2) study design, and (3) analysis and findings. Our study team agreed that these criteria were useful for the reporting on ethnographic methods. However, we noted several areas where additional information and emphasis could improve clarity in reporting (Table 3).

Domain 1: research team and reflexivity

COREQ's first domain includes criteria on researcher credentials (Item 2), occupation (Item 3), gender (Item 4), experience and training (Item 5), and relationship with participants (Items 6–8). Reflecting on researchers' characteristics and relationship to studies can add substantially to ethnographic approaches (Barry et al., 1999; Bikker et al., 2017). As Dixon-Woods (2003) has argued, "researchers are required to be reflexive—that is, to reflect on and be able to give an account of how they produced their interpretations—and to be able to show that their interpretation is warranted by the data" (p. 326). Information on researchers' training can improve readers' confidence in the execution of methods. Explanations of researchers' positionality can improve readers' understandings of how studies were conducted and what insights were available to researchers.

We found that a few articles in our review included information on researchers' training and relationship to study sites and participants. We recommend that articles delineate researchers' training and experience in ethnographic methods, including any training provided for completion of the study. We also recommend providing detailed information on researchers' relationship to the study site and participants, which may go beyond the items explicitly listed in COREQ. Discussing researchers' social position and characteristics in relation to study sites and participants may be relevant depending on the study's context and aims.

In the IS field, clarifying how researchers were perceived by participants and their existing roles in organizations is especially important. Implementation efforts may be perceived as burdensome top-down initiatives by some staff. In these situations, staff may withhold their honest views if they perceive researchers as surveillance agents for organizational leadership. Researchers can contextualize these dynamics by clarifying their position within organizations and explicating their relationship with participants. Delineating any strategies that were used to gain participants' trust is recommended.

Domain 2: study design

COREQ's second domain includes criteria on methodological orientation and theory (Item 9), participant selection

(Items 10–13), setting (Items 14–16), and data collection (Items 17–23). In our review, we found substantial diversity in articles' study designs, with many using mixed- or multi-method designs. This diversity makes comprehensive reporting of study designs crucial.

Beyond the existing items in COREQ's Domain 2, we recommend that researchers explain why an ethnographic approach is appropriate for their research question, clarifying what they mean by "ethnographic" and, if relevant, the relationship between their theoretical approach and their use of ethnographic methods. If appropriate, we recommend that researchers consider applying and referencing approaches to focused or rapid ethnography when planning and reporting studies (Higginbottom et al., 2013; Knoblauch, 2005; Palinkas & Zatzick, 2019; Wall, 2015). Such approaches often provide clear guidelines for their use and are typically understood to be distinct from conventional ethnography, which may help avoid ambiguity (Knoblauch, 2005; Wall, 2015).

Given the contested meanings of ethnography, we recommend that researchers consider whether referencing ethnography adds or detracts from understanding their approaches. We propose that the invocation of ethnography merely to justify the use of observation in methods is unnecessary. Describing observational methods as ethnographic is rarely clarifying, given the breadth of meanings associated with ethnography that we observed. Rather, researchers may focus on detailing how observational methods were employed, by whom, and what their goals were. Similarly, researchers merely seeking to convey that their studies were conducted in "real world" settings or during routine activities may describe their work as in situ rather than as ethnographic.

Ethnographic approaches often involve informal interactions in mundane activities that can be difficult to convey in a formal description of methods. Clifford Geertz (1998) famously theorized ethnographic work as "deep hanging out." Few articles in our review conveyed such unstructured immersive approaches, possibly because they were not used or because researchers were concerned that these would not be perceived as rigorous. We encourage researchers to describe informal, unstructured, and unplanned interactions that contributed meaningfully to data collection and provide important insights. Phenomenological approaches may prove useful to implementation researchers who wish to engage with such unplanned or unstructured research experiences (Cohen et al., n.d.; van Manen, 2016).

An advantage of ethnographic approaches is that they are commonly iterative. Study settings and participants can evolve as researchers gain knowledge and insights (Agar, 2006). We recommend that researchers explicitly delineate how their planned approaches evolved over the course of the study and why. Such descriptions can provide valuable information for readers. Clear descriptions of such iterative approaches may

also contribute to evolving ethnographic methodologies and study designs in IS.

Domain 3: analysis and findings

COREQ's Domain 3 includes criteria related to data analysis (Items 24–28) and reporting (Items 29–32). COREQ presumes that researchers will use some approach to data coding leading to theme derivation in analyses. While ethnographic analyses do generally involve identification of themes, they may not involve explicit data coding (Agar, 2006). Regardless of how themes are derived, we recommend that researchers' reflexivity be explicitly considered in analyses, given its central importance to ethnographic approaches (Barry et al., 1999; Bikker et al., 2017). We similarly suggest that researchers present results within their sociohistorical context if it will improve the understanding of their findings.

Given the diversity of study designs within which ethnographic approaches are used in IS, differing approaches to presenting results are to be expected. COREQ emphasizes the importance of presenting quotations in results (Item 29). We additionally recommend that researchers present results from all methods used as a part of ethnographic approaches, including observational methods. Doing so may include descriptions of settings or events that were noteworthy. Use of digital media, including audio, photographs, and video, may also be used to convey researchers' observations (Underberg & Zorn, 2013).

Researchers seeking to follow our recommendations may encounter structural barriers from journals in the form of word limits or formatting requirements. Notably, sociology and anthropology journals, where ethnographic research has traditionally been published, have word limits in the range of 9,000–15,000, rather than 2,000–4,000 that is typical of health journals, and do not dictate the article structure. We encourage health journal editors to allow longer article lengths for qualitative and mixed-methods work. Editors may consider allowing longer versions of methods and results for online publication with abbreviated print versions.

In some instances, our recommendations may suggest a blurring of traditional article structures and headings. Researchers may need to preview results if they describe how methods iteratively evolved or preview discussion topics if they present their results within a sociohistorical context. We encourage researchers and editors to be open to flexible presentations of studies if these convey more faithfully iterative, recursive, and reflexive approaches. We recognize that article length and structure guidelines are unlikely to change in the near term. We encourage researchers to seek creative ways in which to communicate their ethnographic and mixed-methods approaches within existing parameters. This may include using supplemental materials sections or publishing separate study protocols that provide additional methodological detail.

Limitations

As a scoping review, our study provides an exploratory rather than a comprehensive view of ethnography in IS. Our analyses are likely influenced by our disciplinary backgrounds, though we sought to recruit a multidisciplinary team and critically challenge our implicit notions through iterative coding and discussions. Our recommendations are aimed at improving clarity and comprehension in communicating ethnographic approaches, but we did not make suggestions for what ethnography is or how it should be done in IS.

Conclusion

Ethnographic approaches to IS may allow researchers to gain insights that would not be available through other methods, particularly on the interactions between implementation processes and context as well as insiders' views of implementations efforts. Comprehensive and harmonized reporting approaches could improve the understanding of ethnographic approaches, enhancing its value in IS.

Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

ORCID iDs

Alex K Gertner https://orcid.org/0000-0001-7781-3681

Gracelyn H Cruden https://orcid.org/0000-0002-1737-5867

Byron J Powell https://orcid.org/0000-0001-5245-1186

Supplemental material

Supplemental material for this article is available online.

References

Agar, M. (2006). An ethnography by any other name. *Forum Qualitative Sozialforschung*, *7*(4), 36. https://doi.org/10.17169/fqs-7.4.177

Anguera, M. T., Blanco-Villaseñor, A., Losada, J. L., Sánchez-Algarra, P., & Onwuegbuzie, A. J. (2018). Revisiting the difference between mixed methods and multimethods: Is it all in the name? *Quality and Quantity*, *52*(6), 2757–2770. https://doi.org/10.1007/s11135-018-0700-2

Association of American Medical Colleges. (2019). *Diversity in medicine: Facts and figures 2019*. https://www.aamc.org/data-reports/workforce/report/diversity-medicine-facts-and-figures-2019

Bardosh, K. L. (2018). Towards a science of global health delivery: A socio-anthropological framework to improve the effectiveness of neglected tropical disease interventions. *PLOS Neglected Tropical Diseases*, *12*(7), Article e0006537. https://doi.org/10.1371/journal.pntd.0006537

Barry, C. A., Britten, N., Barber, N., Bradley, C., & Stevenson, F. (1999). Using reflexivity to optimize teamwork in qualitative research. *Qualitative Health Research*, *9*(1), 26–44. https://doi.org/10.1177/104973299129121677

Bauer, M. S., Damschroder, L., Hagedorn, H., Smith, J., & Kilbourne, A. M. (2015). An introduction to implementation science for the non-specialist. *BMC Psychology*, *3*, Article 32. https://doi.org/10.1186/s40359-015-0089-9

Baumbusch, J., Wu, S., Lauck, S. B., Banner, D., O'Shea, T., & Achtem, L. (2018). Exploring the synergies between focused ethnography and integrated knowledge translation. *Health Research Policy and Systems*, *16*(1), 103. https://doi.org/10.1186/s12961-018-0376-z

Bikker, A. P., Atherton, H., Brant, H., Porqueddu, T., Campbell, J. L., Gibson, A., McKinstry, B., Salisbury, C., & Ziebland, S. (2017). Conducting a team-based multi-sited focused ethnography in primary care. *BMC Medical Research Methodology*, *17*(1), Article 139. https://doi.org/10.1186/s12874-017-0422-5

Blackstock, U. (2020, January 16). Why Black doctors like me are leaving faculty positions in academic medical centers. *Stat*. https://www.statnews.com/2020/01/16/black-doctors-leaving-faculty-positions-academic-medical-centers/

Boaz, A., Glenn, R., Locock, L., Sturmey, G., Gager, M., Vougioukalou, S., Ziebland, S., & Fielden, J. (2016). What patients do and their impact on implementation. *Journal of Health Organization and Management*, *30*(2), 258–278. https://doi.org/10.1108/JHOM-02-2015-0027

Bosk, C. L. (2003). *Forgive and remember: Managing medical failure* (2nd ed.). University of Chicago Press.

Braithwaite, J., Churruca, K., Long, J. C., Ellis, L. A., & Herkes, J. (2018). When complexity science meets implementation science: A theoretical and empirical analysis of systems change. *BMC Medicine*, *16*(1), Article 63. https://doi.org/10.1186/s12916-018-1057-z

Brink, P. J., & Edgecombe, N. (2003). What is becoming of ethnography? *Qualitative Health Research*, *13*(7), 1028–1030. https://doi.org/10.1177/1049732303253542

Bunce, A. E., Gold, R., Davis, J. V., McMullen, C. K., Jaworski, V., Mercer, M., & Nelson, C. (2014). Ethnographic process evaluation in primary care: Explaining the complexity of implementation. *BMC Health Services Research*, *14*(1), Article 607. https://doi.org/10.1186/s12913-014-0607-0

Campbell, M., & Gregor, F. (2004). *Mapping social relations: A primer in doing institutional ethnography*. AltaMira Press.

Centre for Statistics in Medicine. (n.d.). *EQUATOR network*. University of Oxford. https://www.equator-network.org/

Charani, E., Tarrant, C., Moorthy, K., Sevdalis, N., Brennan, L., & Holmes, A. H. (2017). Understanding antibiotic decision making in surgery-a qualitative analysis. *Clinical Microbiology and Infection*, 23(10), 752–760. https://doi.org/10.1016/j.cmi.2017.03.013

Clarke, D. J., Godfrey, M., Hawkins, R., Sadler, E., Harding, G., Forster, A., McKevitt, C., Dickerson, J., & Farrin, A. (2013). Implementing a training intervention to support caregivers after stroke: A process evaluation examining the initiation and embedding of programme change. *Implementation Science*, 8, 96. https://doi.org/10.1186/1748-5908-8-96

Clifford, J. & Marcus, G. E. (Eds.). (1986). *Writing culture: The poetics and politics of ethnography*. University of California Press.

Cohen, D., Crabtree, B. F., Damschroder, L., Hamilton, A. B., Heurtin-Roberts, S., Leeman, J., Padgett, D. K., Palinkas, L., Rabin, B., & Schacht Reisinger, H. (n.d.). *Qualitative methods in implementation science*. National Cancer Institute.

Curran, G. M., Bauer, M., Mittman, B., Pyne, J. M., & Stetler, C. (2012). Effectiveness-implementation hybrid designs: Combining elements of clinical effectiveness and implementation research to enhance public health impact. *Medical Care*, 50(3), 217–226. https://doi.org/10.1097/MLR.0b013e3182408812

Dainty, K. N., Racz, E., Morrison, L. J., & Brooks, S. C. (2016). Implementation of a post-arrest care team: Understanding the nuances of a team-based intervention. *Implementation Science*, 11(1), 112. https://doi.org/10.1186/s13012-016-0463-x

Damschroder, L. J., Aron, D. C., Keith, R. E., Kirsh, S. R., Alexander, J. A., & Lowery, J. C. (2009). Fostering implementation of health services research findings into practice: A consolidated framework for advancing implementation science. *Implementation Science*, 4(1), 50. https://doi.org/10.1186/1748-5908-4-50

Dixon-Woods, M. (2003). What can ethnography do for quality and safety in health care? *BMJ Quality & Safety*, 12(5), 326–327. https://doi.org/10.1136/qhc.12.5.326

Dixon-Woods, M., Leslie, M., Bion, J., & Tarramt, C. (2012). What counts? An ethnographic study of infection data reported to a patient safety program. *Milbank Quarterly*, 90(3), 548–591. https://doi.org/10.1111/j.1468-0009.2012.00674.x

Dlamini-Simelane, T., & Moyer, E. (2017). Task shifting or shifting care practices? The impact of task shifting on patients' experiences and health care arrangements in Swaziland. *BMC Health Services Research*, 17(1), Article 20. https://doi.org/10.1186/s12913-016-1960-y

Dorsey, S., Lucid, L., Murray, L., Bolton, P., Itemba, D., Manongi, R., & Whetten, K. (2015). A qualitative study of mental health problems among orphaned children and adolescents in Tanzania. *The Journal of Nervous and Mental Disease*, 203(11), 864–870. https://doi.org/10.1097/NMD.0000000000000388

Drew, S., Judge, A., Cohen, R., Fitzpatrick, R., Barker, K., & Gooberman-Hill, R. (2019). Enhanced recovery after surgery implementation in practice: An ethnographic study of services for hip and knee replacement. *BMJ Open*, 9(3), Article e024431. https://doi.org/10.1136/bmjopen-2018-024431

Eccles, M. P., & Mittman, B. S. (2006). Welcome to implementation science. *Implementation Science*, 1(1), 1. https://doi.org/10.1186/1748-5908-1-1

English, M., Nzinga, J., Mbindyo, P., Ayieko, P., Irimu, G., & Mbaabu, L. (2011). Explaining the effects of a multifaceted intervention to improve inpatient care in rural Kenyan hospitals—Interpretation based on retrospective examination of data from participant observation, quantitative and qualitative studies. *Implementation Science*, 6, 124. https://doi.org/10.1186/1748-5908-6-124

Evans, M. K., Rosenbaum, L., Malina, D., Morrissey, S., & Rubin, E. J. (2020). Diagnosing and treating systemic racism. *New England Journal of Medicine*, 383(3), 274–276. https://doi.org/10.1056/NEJMe2021693

Fetterman, D. M. (1998). *Ethnography: Step by step* (2nd ed.). SAGE. https://doi.org/10.1016/s1098-2140(00)00096-5

Finley, E. P., Huynh, A. K., Farmer, M. M., Bean-Mayberry, B., Moin, T., Oishi, S. M., Moreau, J. L., Dyer, K. E., Lanham, H. J., Leykum, L., & Hamilton, A. B. (2018). Periodic reflections: A method of guided discussions for documenting implementation phenomena. *BMC Medical Research Methodology*, 18(1), Article 153. https://doi.org/10.1186/s12874-018-0610-y

Geertz, C. (1998, October 22). Deep hanging out. *New York Review of Books*. https://www.nybooks.com/articles/1998/10/22/deep-hanging-out/

Glasgow, R. E., Vogt, T. M., Boles, S. M., & Glasgow, E. (1999). Evaluating the public health impact of health promotion interventions: The RE-AIM framework. *American Journal of Public Health*, 89(9), 1322–1327. https://doi.org/10.2105/AJPH.89.9.1322

Greenhalgh, T., & Swinglehurst, D. (2011). Studying technology use as social practice: The untapped potential of ethnography. *BMC Medicine*, 9(1), Article 45. https://doi.org/10.1186/1741-7015-9-45

Hamilton, A. B., & Finley, E. P. (2020). Qualitative methods in implementation research: An introduction. *Psychiatry Research*, 283, 112629. https://doi.org/10.1016/j.psychres.2019.112629

Hammersley, M. (2018). What is ethnography? Can it survive? Should it? *Ethnography and Education*, 13(1), 1–17. https://doi.org/10.1080/17457823.2017.1298458

Higginbottom, G. M. A., Pillay, J. J., & Boadu, N. Y. (2013). Guidance on performing focused ethnographies with an emphasis on healthcare research. *Qualitative Report*, 18(9), 1–16. https://doi.org/10.7939/R35M6287P

Hohmann, A. A., & Shear, M. K. (2002). Community-based intervention research: Coping with the "noise" of real life in study design. *American Journal of Psychiatry*, 159(2), 201–207.

Horton, R. (2019). Offline: Transcending the guilt of global health. *The Lancet*, 394, 996. https://doi.org/10.1016/S0140-6736(19)32177-4

Huby, G., Hart, E., McKevitt, C., & Sobo, E. (2007). Addressing the complexity of health care: The practical potential of ethnography. *Journal of Health Services Research & Policy*, 12(4), 193–194. https://doi.org/10.1258/135581907782101516

Ilott, I., Gerrish, K., Pownall, S., Eltringham, S., & Booth, A. (2013). Exploring scale-up, spread, and sustainability: An instrumental case study tracing an innovation to enhance dysphagia care. *Implementation Science*, 8(1), 128. https://doi.org/10.1186/1748-5908-8-128

Jacobsen, F. F., Mekki, T. E., Forland, O., Folkestad, B., Kirkevold, O., Skar, R., Tveit, E. M., & Oye, C. (2017). A

mixed method study of an education intervention to reduce use of restraint and implement person-centered dementia care in nursing homes. *BMC Nursing*, *16*, Article 55. https://doi.org/10.1186/s12912-017-0244-0

Jenkins, E. K., Kothari, A., Bungay, V., Johnson, J. L., & Oliffe, J. L. (2016). Strengthening population health interventions: Developing the CollaboraKTion Framework for Community-Based Knowledge Translation. *Health Research Policy and Systems*, *14*(1), 65. https://doi.org/10.1186/s12961-016-0138-8

Jowsey, T. (2016). Watering down ethnography. *BMJ Quality & Safety*, *25*(7), 554–555. https://doi.org/10.1136/bmjqs-2016-005325

Kitson, A. L., Rycroft-Malone, J., Harvey, G., Mccormack, B., Seers, K., & Titchen, A. (2008). Evaluating the successful implementation of evidence into practice using the PARiHS framework: Theoretical and practical challenges. *Implementation Science*, *3*, 1. https://doi.org/10.1186/1748-5908-3-1

Knoblauch, H. (2005). Focused ethnography. *Forum Qualitative Sozialforschung*, *6*(3), 44.

Lambert, H. (2002). Anthropology in health research: From qualitative methods to multidisciplinarity. *British Medical Journal*, *325*(7357), 210–213. https://doi.org/10.1136/bmj.325.7357.210

Levac, D., Colquhoun, H., & O'Brien, K. K. (2010). Scoping studies: Advancing the methodology. *Implementation Science*, *5*(1), 69. https://doi.org/10.1186/1748-5908-5-69

Lewis, C. C., Boyd, M. R., Walsh-Bailey, C., Lyon, A. R., Beidas, R., Mittman, B., Aarons, G. A., Weiner, B. J., & Chambers, D. A. (2020). A systematic review of empirical studies examining mechanisms of implementation in health. *Implementation Science*, *15*(1), 21. https://doi.org/10.1186/s13012-020-00983-3

Lewis, C. C., Klasnja, P., Powell, B. J., Lyon, A. R., Tuzzio, L., Jones, S., Walsh-Bailey, C., & Weiner, B. (2018). From classification to causality: Advancing understanding of mechanisms of change in implementation science. *Frontiers in Public Health*, *6*, Article 136. https://doi.org/10.3389/fpubh.2018.00136

McCullough, M. B., Chou, A. F., Solomon, J. L., Petrakis, B. A., Kim, B., Park, A. M., Benedict, A. J., Hamilton, A. B., & Rose, A. J. (2015). The interplay of contextual elements in implementation: An ethnographic case study. *BMC Health Services Research*, *15*(1), Article 62. https://doi.org/10.1186/s12913-015-0713-7

McKay, R. (2018, August 13). Teaching and critiquing global health: Or, "I think I'll go into consulting." *American Anthropologist*. http://www.americananthropologist.org/teaching-and-critiquing-global-health-or-i-think-ill-go-into-consulting/

Morgan-Trimmer, S., & Wood, F. (2016). Ethnographic methods for process evaluations of complex health behaviour interventions. *Trials*, *17*(1), 232. https://doi.org/10.1186/s13063-016-1340-2

Mumtaz, Z., Salway, S., Nyagero, J., Osur, J., Chirwa, E., Kachale, F., & Saunders, D. (2016). Improving the Standards-Based Management-Recognition initiative to provide high-quality, equitable maternal health services in Malawi: An implementation research protocol. *BMJ Global Health*, *1*(1), Article e000022. https://doi.org/10.1136/bmjgh-2015-000022

National Academies of Science Engineering and Medicine. (2018). *Sexual harassment of women* (P. A. Johnson, S. E. Widnall, & F. F. Benya, Eds.). National Academies Press. https://doi.org/10.17226/24994

Newhouse, R., Bobay, K., Dykes, P. C., Stevens, K. R., & Titler, M. (2013). Methodology issues in implementation science. *Medical Care*, *51*(4, Suppl. 2), S32–S40. https://doi.org/10.1097/MLR.0b013e31827feeca

NIH Fogarty International Center. (2018). *Toolkit Part 1: Implementation Science Methodologies and Frameworks*. Global Health Resources, CDC. https://www.fic.nih.gov/About/center-global-health-studies/neuroscience-implementation-toolkit/Pages/methodologies-frameworks.aspx

Nilsen, P. (2015). Making sense of implementation theories, models and frameworks. *Implementation Science*, *10*(1), 53. https://doi.org/10.1186/s13012-015-0242-0

O'Reilly, K. (2012). *Ethnographic methods* (2nd ed.). Routledge.

Palinkas, L. A., & Zatzick, D. (2019). Rapid assessment procedure informed clinical ethnography (RAPICE) in pragmatic clinical trials of mental health services implementation: Methods and applied case study. *Administration and Policy in Mental Health and Mental Health Services Research*, *46*(2), 255–270. https://doi.org/10.1007/s10488-018-0909-3

Park, M. M., Lencucha, R., Mattingly, C., Zafran, H., & Kirmayer, L. J. (2015). A qualitative study on the ethics of transforming care: Examining the development and implementation of Canada's first mental health strategy. *Implementation Science*, *10*(1), 121. https://doi.org/10.1186/s13012-015-0297-y

Patel, B., Patel, A., Jan, S., Usherwood, T., Harris, M., Panaretto, K., Zwar, N., Redfern, J., Jansen, J., Doust, J., & Peiris, D. (2014). A multifaceted quality improvement intervention for CVD risk management in Australian primary healthcare: A protocol for a process evaluation. *Implementation Science*, *9*(1), 187. https://doi.org/10.1186/s13012-014-0187-8

Pope, L. G., Cubellis, L., & Hopper, K. (2016). Signing on for dirty work: Taking stock of a public psychiatry project from the inside. *Transcultural Psychiatry*, *53*(4), 506–526. https://doi.org/10.1177/1363461516655947

Powell, B. J., Fernandez, M. E., Williams, N. J., Aarons, G. A., Beidas, R. S., Lewis, C. C., McHugh, S. M., & Weiner, B. J. (2019). Enhancing the impact of implementation strategies in healthcare: A research agenda. *Frontiers in Public Health*, *7*, Article 3. https://doi.org/10.3389/fpubh.2019.00003

Proctor, E. K., Landsverk, J., Aarons, G., Chambers, D., Glisson, C., & Mittman, B. (2009). Implementation research in mental health services: An Emerging science with conceptual, methodological, and training challenges. *Administration and Policy in Mental Health and Mental Health Services Research*, *36*(1), 24–34. https://doi.org/10.1007/s10488-008-0197-4

Proctor, E. K., Silmere, H., Raghavan, R., Hovmand, P., Aarons, G., Bunger, A., Griffey, R., & Hensley, M. (2011). Outcomes for implementation research: Conceptual distinctions, measurement challenges, and research agenda. *Administration and Policy in Mental Health and Mental Health Services Research*, *38*(2), 65–76. https://doi.org/10.1007/s10488-010-0319-7

Quinn, N. (2005). How to reconstruct schemas people share, from what they say. In N. Quinn (Ed.), *Finding culture in talk: A collection of methods* (pp. 35–81). Palgrave Macmillan.

Rapkin, B. D., & Trickett, E. J. (2005). Comprehensive dynamic trial designs for behavioral prevention research with communities: Overcoming inadequacies of the randomized controlled trial paradigm. In E. J. Trickett., & W. Pequegnat (Eds.), *Community interventions and AIDS* (pp. 249–277). Oxford University Press.

Reed, J. E., Howe, C., Doyle, C., & Bell, D. (2018). Simple rules for evidence translation in complex systems: A qualitative study. *BMC Medicine*, *16*(1), Article 92. https://doi.org/10.1186/s12916-018-1076-9

Reeves, S., Kuper, A., & Hodges, B. D. (2008). Qualitative research methodologies: Ethnography. *British Medical Journal*, *337*, Article a1020. https://doi.org/10.1136/bmj.a1020

Rogers, E. (2003). *Diffusion of Innovations* (5th ed.). Free Press.

Savage, J. (2000). Ethnography and health care. *British Medical Journal*, *321*(7273), 1400–1402. https://doi.org/10.1136/bmj.321.7273.1400

Sax, H., Clack, L., Touveneau, S., da Liberdade Jantarada, F., Pittet, D., & Zingg, W. (2013). Implementation of infection control best practice in intensive care units throughout Europe: A mixed-method evaluation study. *Implementation Science*, *8*(1), 24. https://doi.org/10.1186/1748-5908-8-24

Scott, S. D., Estabrooks, C. A., Allen, M., & Pollock, C. (2008). A context of uncertainty: How context shapes nurses' research utilization behaviors. *Qualitative Health Research*, *18*(3), 347–357. https://doi.org/10.1177/1049732307313354

Shaw, J. A., Kontos, P., Martin, W., & Victor, C. (2017). The institutional logic of integrated care: An ethnography of patient transitions. *Journal of Health Organization and Management*, *31*(1), 82–95. https://doi.org/10.1108/JHOM-06-2016-0123

Sobo, E. J., Bowman, C., Aarons, G. A., Asch, S., & Gifford, A. L. (2008). Enhancing organizational change and improvement prospects: Lessons from an HIV testing intervention for veterans. *Human Organization*, *67*(4), 443–453. https://doi.org/10.17730/humo.67.4.6p5778357w511757

Stirman, S. W., Baumann, A. A., & Miller, C. J. (2019). The FRAME: An expanded framework for reporting adaptations and modifications to evidence-based interventions. *Implementation Science*, *14*(1), 58. https://doi.org/10.1186/s13012-019-0898-y

Sufrin, C. (2015). "Doctor, why didn't you adopt my baby?" Observant participation, care, and the simultaneous practice of medicine and anthropology. *Culture, Medicine, and Psychiatry*, *39*, 614–633. https://doi.org/10.1007/s11013-015-9435-x

Tong, A., Sainsbury, P., & Craig, J. (2007). Consolidated criteria for reporting qualitative research (COREQ): A 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*, *19*(6), 349–357. https://doi.org/10.1093/intqhc/mzm042

Tumilowicz, A., Neufeld, L. M., & Pelto, G. H. (2015). Using ethnography in implementation research to improve nutrition interventions in populations. *Maternal & Child Nutrition*, *11*, 55–72. https://doi.org/10.1111/mcn.12246

Underberg, N. M., & Zorn, E. (2013). *Digital ethnography: Anthropology, narrative, and new media*. University of Texas Press. https://doi.org/10.1080/1472586x.2014.863021

van Manen, M. (2016). *Researching lived experience: Human science for an action sensitive pedagogy* (2nd ed.). Routledge. https://doi.org/10.4324/9781315421056

Wall, S. (2015). Focused ethnography: A methodological adaption for social research in emerging contexts. *Forum Qualitative Sozialforschung*, *16*(1), 1. https://doi.org/10.17169/fqs-16.1.2182

Waring, J. J. (2009). Constructing and re-constructing narratives of patient safety. *Social Science & Medicine*, *69*(12),1722–1731.

Waring, J., & Jones, L. (2016). Maintaining the link between methodology and method in ethnographic health research. *BMJ Quality & Safety*, *25*(7), 556–557. https://doi.org/10.1136/bmjqs-2016-005325

Webster, F., Fehlings, M. G., Rice, K., Malempati, H., Fawaz, K., Nicholls, F., Baldeo, N., Reeves, S., Singh, A., Ahn, H., Ginsberg, H., & Yee, A. J. (2014). Improving access to emergent spinal care through knowledge translation: An ethnographic study. *BMC Health Services Research*, *14*, Article 169. https://doi.org/10.1186/1472-6963-14-169

Zobrist, S., Kalra, N., Pelto, G., Wittenbrink, B., Milani, P., Diallo, A. M., Ndoye, T., Wone, I., & Parker, M. (2017). Results of applying cultural domain analysis techniques and implications for the design of complementary feeding interventions in Northern Senegal. *Food and Nutrition Bulletin*, *38*(4), 512–527. https://doi.org/10.1177/0379572117720749

Zuckerman, S., Skopec, L., & Epstein, M. (2017). *Medicaid physician fees after the ACA primary care fee bump* (pp. 1–13). Health Policy Center, Urban Institute. https://www.urban.org/sites/default/files/publication/88836/2001180-medicaid-physician-fees-after-the-aca-primary-care-fee-bump_0.pdf