Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin

# Essentials of Qualitative Research

## Winter School in Clinical Research

## December 2025

Gerry Hughes

Research Synergies Manager

Wellcome-HRB Clinical Research Facility St James's Hospital

# Qualitative research

- *“Qualitative research is designed to explore the human elements of a given topic, while specific qualitative methods examine how individuals see and experience the world. Qualitative approaches are typically used to explore new phenomena and to capture individuals' thoughts, feelings, or interpretations of meaning and process.”*

The SAGE Encyclopaedia of Qualitative Research Methods

# Is qualitative research suited to my research?

Absolutely depends on the research question

# Why qualitative research

- Numbers don’t explain everything in healthcare
- Example – Flu: Quantitative data tells us:
  - Infection rates
  - Hospital admissions
  - Vaccination coverage

  - But it doesn’t explain:
  - Why some patients refuse vaccination
  - Reduced vaccine uptake by healthcare staff

# Features of qualitative research

- Qualitative research studies phenomena in the **natural contexts** of individuals or groups
- Qualitative researchers try to gain a **deeper understanding** of people's experiences, perceptions, behaviour and processes and the meanings they attach to them
- During the research process, researchers use '**emerging design**' to be flexible in adjusting to the context
- Data collection and analysis are **iterative processes** that happen simultaneously as the research progresses

Moser, A., & Korstjens, I. (2017). Series: Practical guidance to qualitative research. Part 1: Introduction. *European Journal of General Practice*, *23*(1), 271–273. https://doi.org/10.1080/13814788.2017.1375093

# Forming the research question

| PEO | Definition | Example |
| --- | --- | --- |
| Population | Who is my question focused on? | mothers |
| Exposure | What is the issue I'm interested in? | postnatal depression |
| Outcome | What, in relation to the issue, do I want to examine? | daily living experiences |

**Research question**: What are the daily living experiences of mothers with postnatal depression?

## Qualitative Research

If you are asking why something happens, how people feel, or what something means.

## Quantitative Research

If your goal is to measure trends, compare groups, or test a hypothesis.

**Image credit**: Britannica School of Leadership & Management: https://schoolofleadership.co.uk/quantitative-vs-qualitative-research

# Quantitative Research

If your goal is to measure trends, compare groups, or test a hypothesis.

- Typically takes the form of **using instruments to collect numerical data**
- Subject that data to measurement, maybe against a **hypothesis**
- Strict controls for validity and **repeatability**
- **Bias** introduced by the researcher is **minimised/eliminated**
- Experimental research and nonexperimental research, retrospective/prospective research

- Seeking to **understand the meaning**
- Provide a **deeper understanding** of problems
- Researcher **bias is acknowledged** but can’t be eliminated
- **Researcher is a lens** through which a reality is reported
- Pure qualitative research, mixed methods

## Qualitative Research

If you are asking why something happens, how people feel, or what something means.

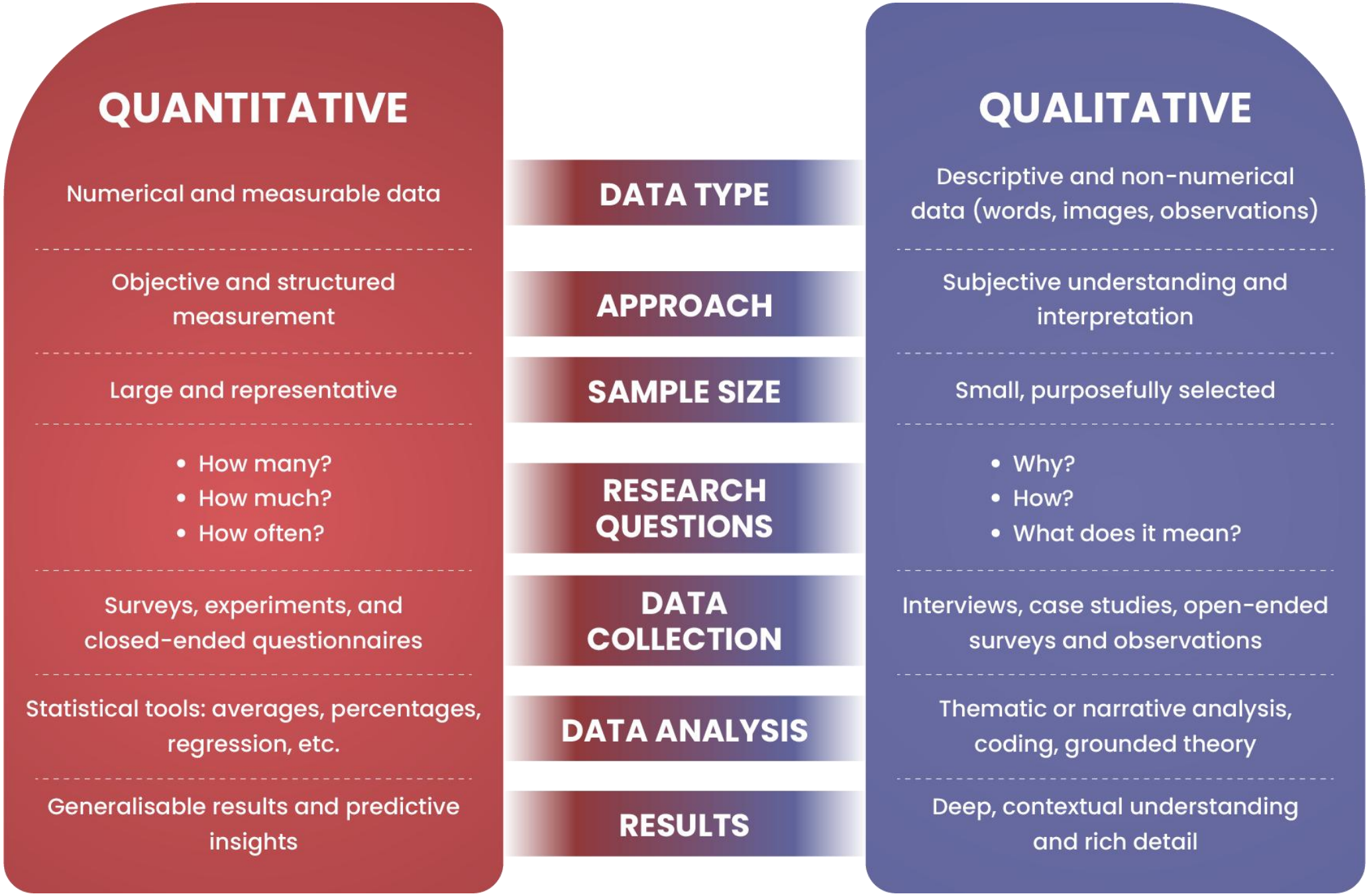



**Image credit**: Britannica School of Leadership & Management: https://schoolofleadership.co.uk/quantitative-vs-qualitative-research

# Research Paradigms

**Table 1**

*Ontologies, Epistemologies, and Axiologies of Common Research Paradigms*

| Paradigm | Ontology | Epistemology | Axiology |
|---|---|---|---|
| Positivism | **Realist**: Objective reality exists independently of human perception. | **Objective**: Knowledge is discovered through empirical observation and measurement. | **Value-Free**: Research should strive for objectivity and eliminate researcher bias. |
| Post-Positivism | **Nuanced Realist**: An objective reality exists, but it can only be imperfectly understood. | **Critical and Fallible**: Knowledge is theory-laden and subject to revision through empirical testing. | **Value-Aware**: Complete objectivity is unattainable, and researchers must be reflexive about biases. |
| Constructivism | **Individual Relativist**: Reality is subjective, constructed by individuals through personal experiences. | **Subjective and Socially Constructed**: Knowledge is socially co-constructed by individuals based on their experiences and interactions. | **Value-Laden**: Values influence knowledge construction. Subjectivity is embraced and reflexivity is encouraged. |
| Social Constructionism | **Social Relativist**: Reality is subjective, constructed through collective human interaction and cultural norms. | **Subjective and Socially Constructed**: Knowledge is constructed through social processes, discourse, and cultural contexts. | **Value-Laden**: Social factors and power dynamics play a role in shaping knowledge. Subjectivity is embraced and reflexivity is encouraged. |

Pretorius, L. (2024). Demystifying research paradigms: Navigating ontology, epistemology, and axiology in research. The Qualitative Report, 29(10), 2698-2715. https://doi.org/10.46743/2160-3715/2024.7632

# Qualitative research strategies/approaches

| Strategy | Purpose | Example |
|---|---|---|
| **Phenomenology** | Lived experience | Coping with chronic illness |
| **Grounded Theory** | Process theory | Patient adherence |
| **Ethnography** | Cultural context | ICU team dynamics |
| **Case Study** | Bounded system | Palliative care unit |
| **Narrative** | Personal stories | Cancer survivor journey |

Adapted from Creswell, J. W. (2013). *Qualitative Inquiry & Research Design: Choosing Among Five Approaches* (3rd ed.). Thousand Oaks, CA: SAGE Publications, Inc.

# Qualitative research data collection methods


**Consider theory-informed data collection instruments**

- Image credit: https://www.questionpro.com/blog/qualitative-data-collection-methods/
- Bourgeault IL, Dingwall R, De Vries RG, editors. The Sage handbook of qualitative methods in health research. Los Angeles: Sage; 2013.

# Sampling

- Usually non-probability sampling strategy
  - **Convenience (opportunistic)** : easy to recruit or are near to the researcher
  - **Purposive:** participants that are best suited to the research question.
  - **Snowball:** initial respondents to a research study are involved in recruiting others
  - **Theoretical:** corroborate or refute theories that are developing
- Sample size, usually much lower than quantitative studies

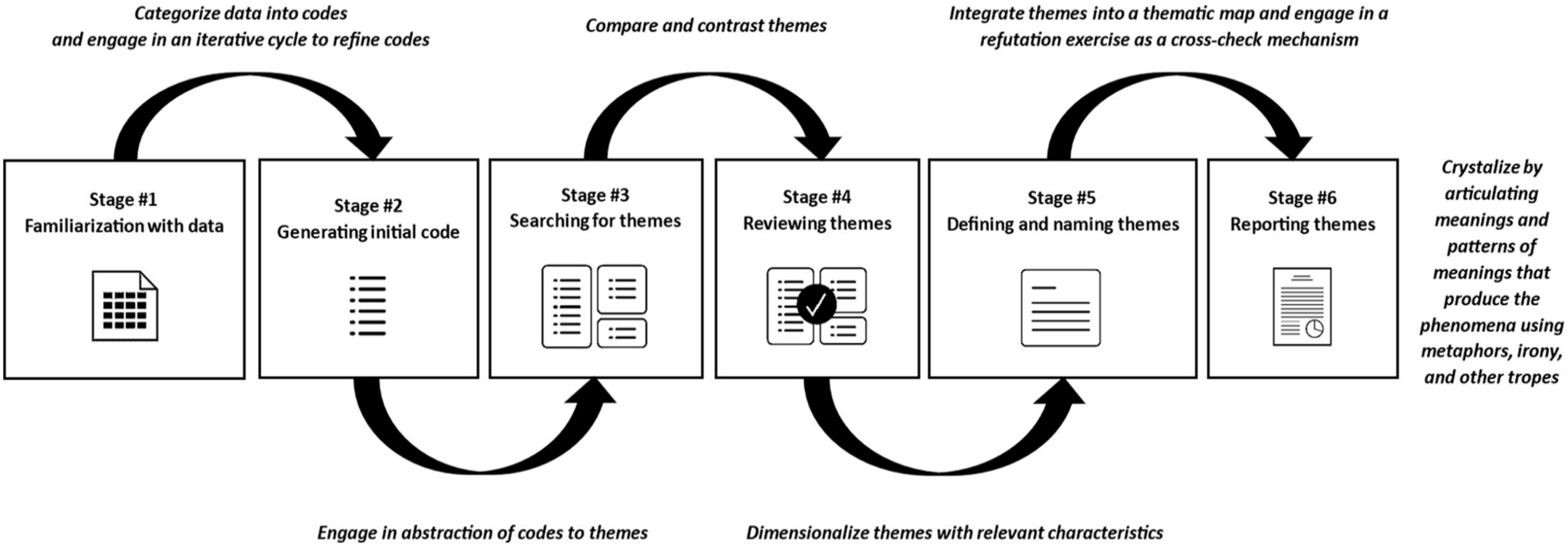
# Common analyses types

| Types of Qualitative Data Analysis | |
|---|---|
| Thematic analysis | The analysis help identify and interpret occurring trends and themes in data. |
| Content analysis | Entails arranging data by themes and keywords to see how they relate. |
| Narrative analysis | Utilized when analyzing word choices and stories from people to understand their experiences. |
| Discourse analysis | Used to understand participants emotions and sentiments based on situations. |
| Grounded theory | Involves developing a theory based on individual data. |

Image credit: https://www.expertresearch-dataanalysishelp.com/NVivo-analysis-services-2702.html

Raskind IG, Shelton RC, Comeau DL, Cooper HLF, Griffith DM, Kegler MC. A Review of Qualitative Data Analysis Practices in Health Education and Health Behavior Research. *Health Education & Behavior*. 2018;46(1):32-39. doi:10.1177/1090198118795019

# Thematic analysis




Lim, W. M. (2024). What Is Qualitative Research? An Overview and Guidelines. *Australasian Marketing Journal*, *33*(2), 199-229. https://doi.org/10.1177/14413582241264619 (Original work published 2025)

# Inductive vs Deductive Analysis

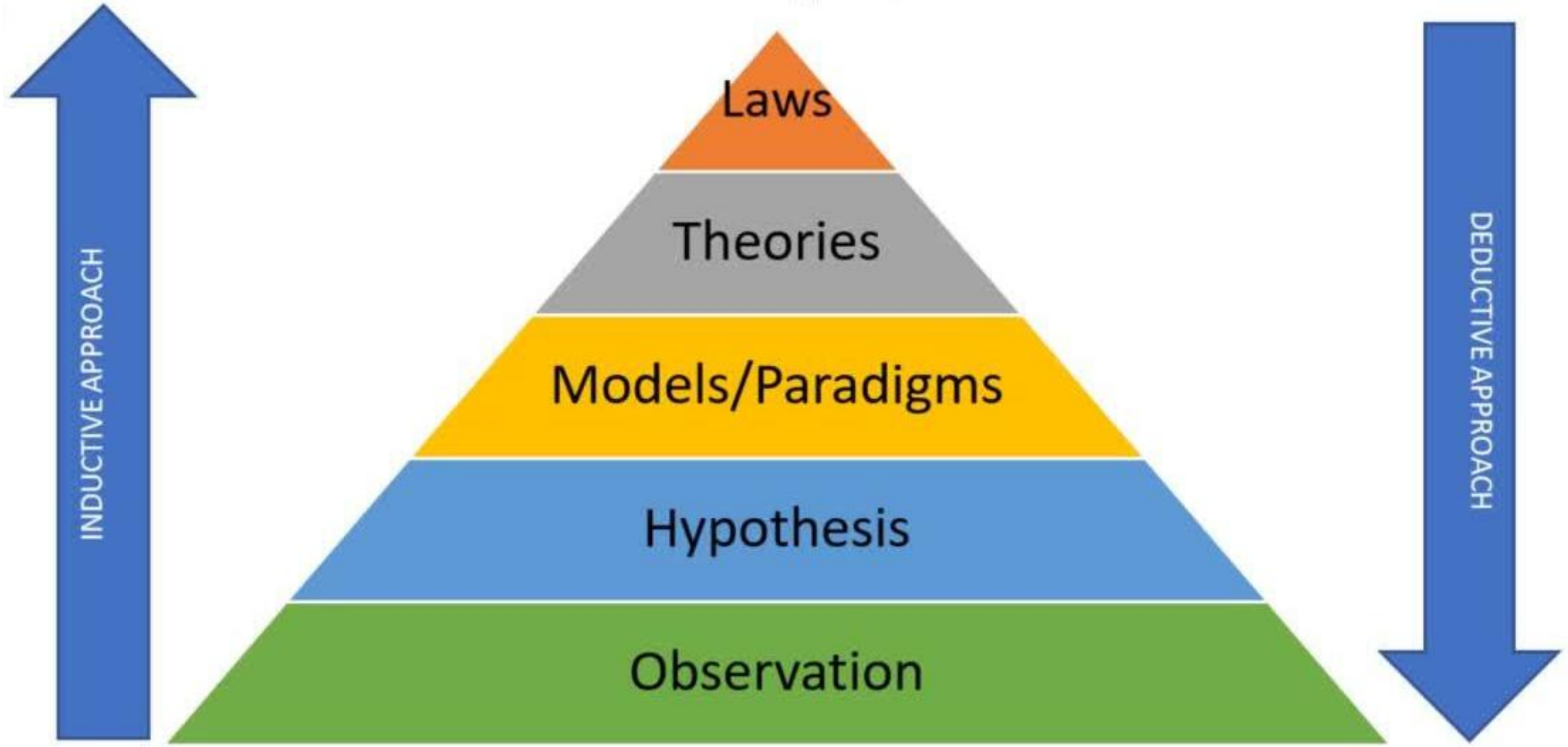
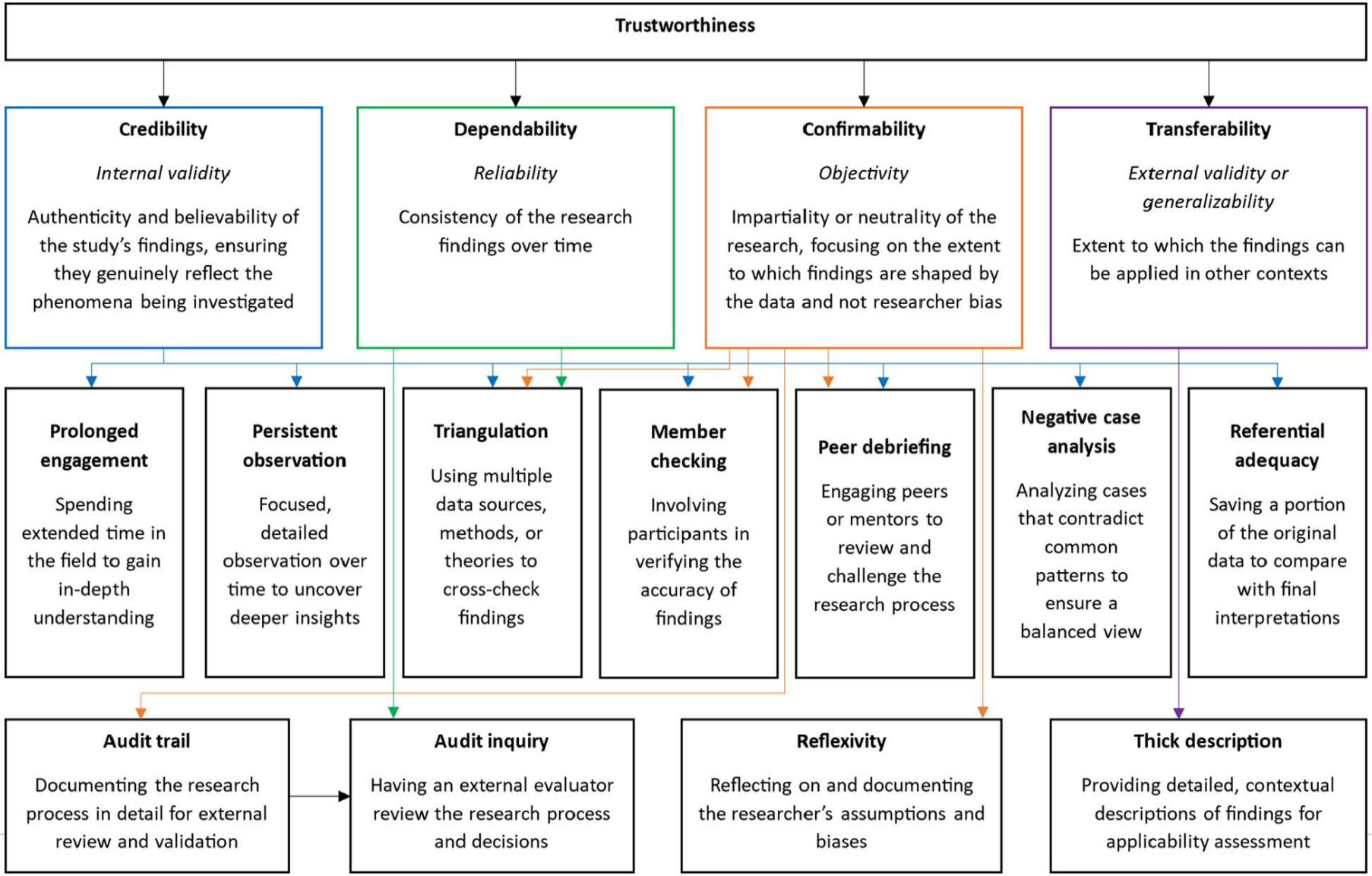



Image credit: Inductive and Deductive Approaches: https://methods.sagepub.com/video/inductive-and-deductive-approaches#_

# Ensuring rigour in qualitative research




Lim, W. M. (2024). What Is Qualitative Research? An Overview and Guidelines. *Australasian Marketing Journal*, *33*(2), 199-229. https://doi.org/10.1177/14413582241264619 (Original work published 2025)


**Saturation refers to the point at which no new data or themes are emerging from the data set, which indicates that the data have been fully explored.**

https://www.sciencedirect.com/science/article/pii/S2949916X24001245
Naeem, M et al (2024). Demystification and Actualisation of Data Saturation in Qualitative Research Through Thematic Analysis. International Journal of Qualitative Methods, 23. https://doi.org/10.1177/16094069241229777

# The SRQR reporting checklist

For checking that qualitative health research articles can be understood and used by everyone

> **Note**
>
> If you have not used a reporting guideline before, read about how and why to use them and check whether SRQR is the most applicable reporting guideline for your work.
>
> Reporting guidelines are most useful when used early in research. When writing a manuscript or application, consider using the Full Guidance where you'll see explanations and examples for each item.
>
> After writing, demonstrate adherence by completing this checklist:
>
> 1. Specify where each item is described (see Note 1).
> 2. Cite this checklist (See Note 2).
> 3. Include your completed checklist as a supplement when submitting to a journal so that future readers can use it to find information.

O'Brien BC, Harris IB, Beckman TJ, Reed DA, Cook DA. Standards for Reporting Qualitative Research: A Synthesis of Recommendations. *Academic Medicine*. 89(9):1245-1251. doi:10.1097/ACM.0000000000000388

| | Item Description | Location (or reason for not reporting) |
|---|---|---|
| **Title & Abstract** | | |
| Title | Describe the nature and topic of the study. Identify the study as qualitative or indicate the approach or data collection methods. | |
| Abstract | Summarise the key elements of the study using the abstract format of the intended publication. | |
| **Introduction** | | |
| Problem Formulation | Describe the problem/phenomenon studied, its significance, relevant theory and empirical work, and gaps in current knowledge. | |
| Purpose or research question | Describe the purpose of the study and specific objectives or questions. | |
| **Methods** | | |
| Qualitative approach and research paradigm | Describe your qualitative approach, your guiding theory (if appropriate), and research paradigm, and reasons for your choices. | |
| Researcher characteristics and reflexivity | Describe how researchers' characteristics may influence the research, including personal attributes, qualifications/experience, relationship with participants, assumptions, and/or presuppositions; | |

| | | |
|---|---|---|
| Context | Describe the setting/site(s) in which the study was conducted, why it was selected, and any other salient contextual factors that may influence the study. | |
| Sampling strategy | Describe how and why research participants, documents, or events were selected; criteria for deciding when no further sampling was necessary, and the rationale for those criteria. | |
| Ethical issues pertaining to human subjects | Describe any approval by an appropriate ethics review board and participant consent, or explain any lack thereof. Describe any other confidentiality and data security issues. | |
| Data collection methods | Describe the types of data collected; details of data collection procedures including (as appropriate) start and stop dates of data collection and analysis, iterative process, triangulation of sources/methods, and modification of procedures in response to evolving study findings. Describe your rationale for these choices. | |
| Data collection instruments and technologies | Describe any instruments (e.g., interview guides, questionnaires) and devices (e.g., audio recorders) used for data collection; describe if/how the instrument(s) changed over the course of the study. | |
| Units of study | Describe the number and relevant characteristics of participants, documents, or events included in the study. Describe the level of participation. | |

| | | |
|---|---|---|
| | participants, documents, or events included in the study. Describe the level of participation. | |
| Data processing | Describe the methods for processing data prior to and during analysis, including transcription, data entry, data management and security, verification of data integrity, data coding, and anonymisation / deidentification of excerpts. | |
| Data analysis | Describe the process by which inferences, themes, etc. were identified and developed, including the researchers involved in data analysis; usually references a specific paradigm or approach. Describe why you chose this process. | |
| Techniques to enhance trustworthiness | Describe any techniques to enhance trustworthiness and credibility of data analysis,(e.g., member checking, triangulation, audit trail). Describe why you chose these techniques. | |
| **Results** | | |
| Synthesis and interpretation | Describe the main findings (e.g., interpretations, inferences, and themes); might include development of a theory or model, or integration with prior | |

| | | |
|---|---|---|
| Links to empirical data | Provide evidence (e.g., quotes, field notes, text excerpts, photographs) to substantiate analytic findings. | |
| **Discussion** | | |
| Integration with prior work, implications, transferability, and contribution(s) to the field | Summarize the main findings, explain how findings and conclusions connect to, support, elaborate on, or challenge conclusions of earlier scholarship; discuss the scope of application/generalizability; identify unique contribution(s) to scholarship in a discipline or field. | |
| Limitations | Discuss the trustworthiness and limitations of findings | |
| **Other** | | |
| Conflicts of interest | Describe any potential sources of influence or perceived influence on study conduct and conclusions. Describe how these were managed. | |
| Funding | Describe sources of funding and other support. Describe the role of funders in data collection, interpretation, and reporting. | |

# Examples of Qualitative Research

# Examples of Qualitative Research

*Antimicrobial Stewardship & Healthcare Epidemiology* (2022), **2**, e63, 1–6
doi:10.1017/ash.2022.20

SHEA

**Original Article**

## Beyond consumption: a qualitative investigation of hospital clinician attitudes to receiving feedback on antimicrobial prescribing quality

Gerry Hughes PhD[1,2], Eilis O' Toole MSc[2,3], Una Coleman BSc[3], Alida Fe Talento MD[4,5], Keith Doyle BSc[6], Aisling O' Leary PhD[7,8] and Colm Bergin MD[1,2]

[1]Department of Infectious Diseases, St. James's Hospital, Dublin, Ireland, [2]Trinity College, Dublin, Ireland, [3]Wellcome/Health Research Board Ireland Clinical Research Facility, St. James's Hospital, Dublin, Ireland, [4]Clinical Microbiology Children's Health Ireland (Temple Street), Dublin, Ireland, [5]Royal College of Surgeons, Dublin, Ireland, [6]Information Management Services, St. James's Hospital, Dublin, Ireland, [7]National Centre for Pharmacoeconomics St. James's Hospital, Dublin, Ireland and [8]School of Pharmacy Royal College of Surgeons, Dublin, Ireland

# Examples of Qualitative Research

*Design, setting, and participants*

We conducted a prospective, qualitative study at St. James's Hospial (SJH) a large, public inner-city tertiary-care referral center in Dublin, Ireland. The SJH AMS program was established in 2001 through a partnership between the departments of Infectious Disease, Clinical Microbiology, and pharmacy. It was not formally funded but was supported by the appointment of a single pharmacist via the Strategy for the Control of Antimicrobial Resistance in Ireland.[14] Prospective audit and feedback was initiated on ward areas; educational programs were developed; and clinical audits were undertaken to monitor prescribing patterns. In 2015, the SJH AMS program underwent strategic, operational, and governance restructuring to reflect best practice in undertaking AMS in acute-care settings.[15] Although the AMS team previously reported to the hospital pharmacy and therapeutics committee, it switched to hospital board reporting through the quality, safety, and improvement division. A new multidisciplinary strategic and oversight committee was formed with stakeholders from all relevant professions (including non–infection-related specialities) and executive management across the hospital.

The study was conducted between June 2019 and May 2020. Electronic and paper posters were distributed throughout the hospital to advertise the study. Clinicians across medical, surgical, nursing, and pharmacy professions were purposively recruited from the hospital clinician population to gain broad insight from key stakeholders relevant to the research aim. High-volume prescribers were not specifically recruited. Informed consent was obtained from each participant.

# Examples of Qualitative Research

### *Data collection*

Focus groups and semistructured interviews were used to collect data and were hosted by a trained facilitator. A literature search informed the interview schedule, which was refined through consensus with the research team. It was subsequently amended iteratively, where deemed necessary, after each focus group or interview.[16] Examples of unbiased discussion questions and follow-up questions are outlined in the Supplementary Materials (interview schedule).

To minimize the potential for power differentials among clinicians, each focus group consisted of homogenous professional groups.[17] Participants were given the option to review their own transcriptions. A pilot focus group with 5 residents was conducted, and results were included in the final data set. No incentives were offered for participation.

The study was approved by the SJH Institutional Review Board and the SJH Research Ethics Committee.

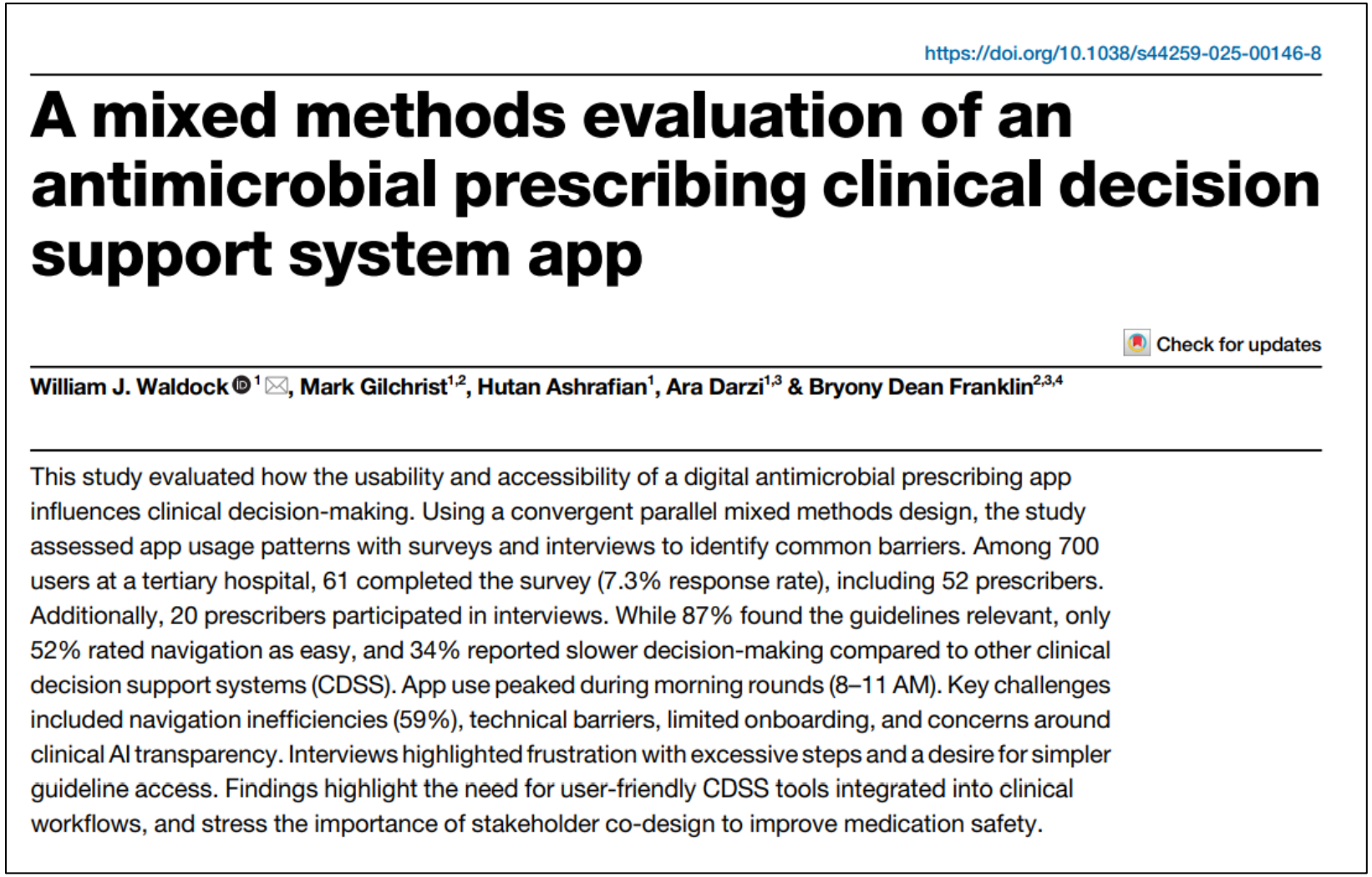
### *Data management and analysis*

Focus groups and interviews were audio-recorded and transcribed verbatim. Reflective notes that contributed to data analysis were also recorded by the primary investigator (G.H). Transcriptions were completed and coded by 1 investigator (G.H.) and were reviewed by 2 additional investigators (A.O.L. and C.B.) for consistency of coded data. Data were analyzed inductively, through thematic analysis,[19] to construct themes.

# Examples of Qualitative Research

| Theme | Illustrative Quotation |
|---|---|
| Antimicrobial consumption perceived as a proxy measure for antimicrobial prescribing quality | "I suppose the things that we would be broadly interested in is obviously volume of prescriptions."—Attending surgeon<br>"It means, if there is a buy-in of less IV antibiotics, everyone and their mother will look it (feedback) all up and do everything and hound this doc and that doc. If it means less IVs and preparing IVs and giving IVs . . . "—Clinical nurse manager |
| Lack of connection between antimicrobial prescribing and patient outcomes | "Just what's relevant to us . . . I want MY report . . . "—Attending physician<br>"And from a stewardship point of view, different wards that are more inclined to use . . . antibiotics that we wouldn't necessarily associate with being first line so . . . "—Medical resident<br>"Why did we spend that much? Oh, because there were 7 patients on the ward and were incredibly sick. I think it (feedback) would have to be externally provided but internally checked."—Attending surgeon |
| Relevance and impact of antimicrobial prescribing feedback associated with professional role | "It (feedback) should be available for everybody that wants to access it. Well, I think! Why would it not be?" Clinical nurse specialist.<br>" . . . It will change your daily practice once you've kinda like, once, em, you can kind of reflect on it."—Medical resident<br>"We can keep hounding attendings and sure, we're at nothing."—Clinical nurse manager<br>"I think sometimes, as well, when you don't have senior decision makers on the ward rounds . . . There are no decisions made. And may not be made for 5 days!"—Clinical nurse manager<br>" . . . The (medication administration) timings, and then that's a nursing perspective that we can govern."—Clinical nurse manager<br>" . . . A resistant organism would be a reason for prescribing something that you wouldn't normally prescribe for that indication."—Medical resident<br>"But looking at the number of people in the hospital who have . . . an antibiotic allergy, and then looking up what they're on . . . ."—Attending physician |

# Mixed Methods



https://doi.org/10.1038/s44259-025-00146-8

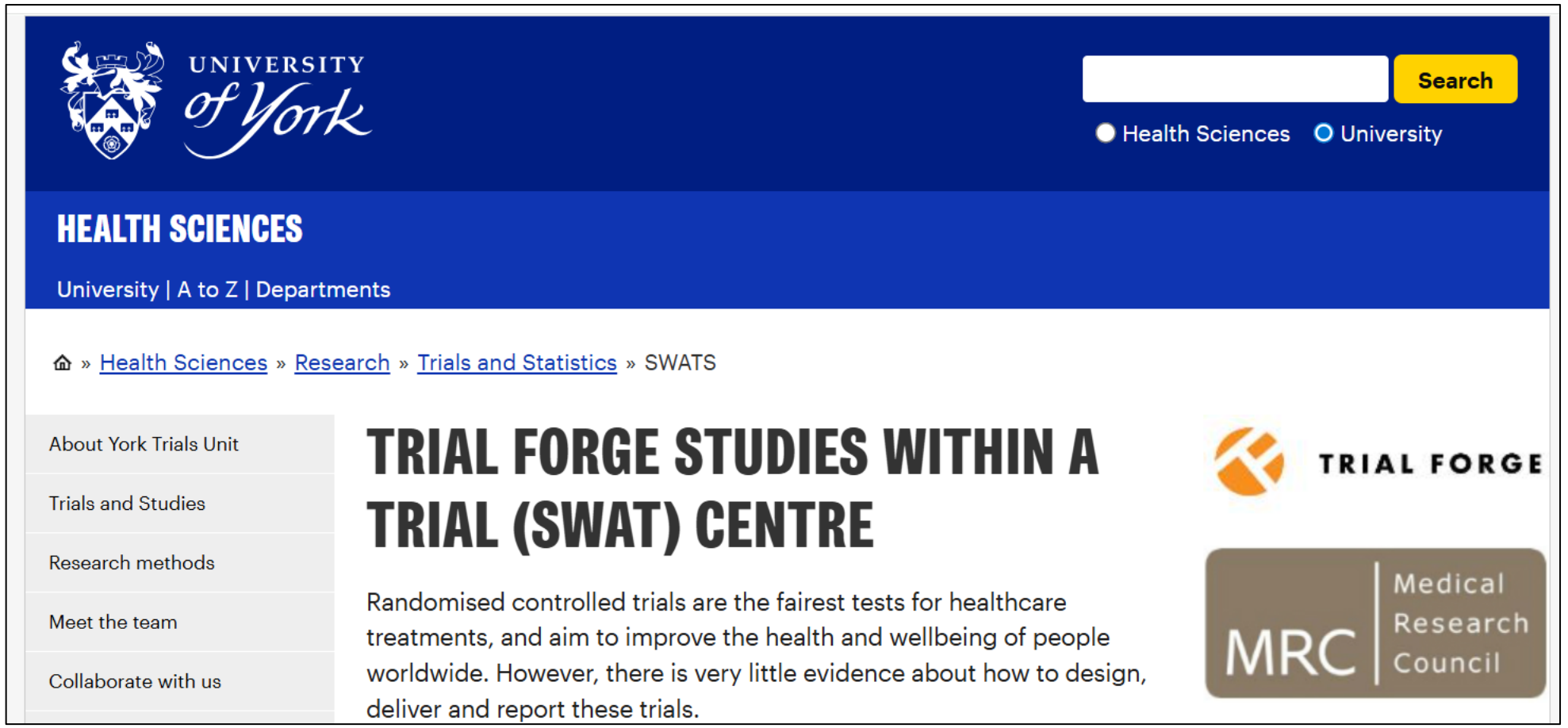
## A mixed methods evaluation of an antimicrobial prescribing clinical decision support system app

Check for updates

William J. Waldock[1] ✉, Mark Gilchrist[1,2], Hutan Ashrafian[1], Ara Darzi[1,3] & Bryony Dean Franklin[2,3,4]

This study evaluated how the usability and accessibility of a digital antimicrobial prescribing app influences clinical decision-making. Using a convergent parallel mixed methods design, the study assessed app usage patterns with surveys and interviews to identify common barriers. Among 700 users at a tertiary hospital, 61 completed the survey (7.3% response rate), including 52 prescribers. Additionally, 20 prescribers participated in interviews. While 87% found the guidelines relevant, only 52% rated navigation as easy, and 34% reported slower decision-making compared to other clinical decision support systems (CDSS). App use peaked during morning rounds (8–11 AM). Key challenges included navigation inefficiencies (59%), technical barriers, limited onboarding, and concerns around clinical AI transparency. Interviews highlighted frustration with excessive steps and a desire for simpler guideline access. Findings highlight the need for user-friendly CDSS tools integrated into clinical workflows, and stress the importance of stakeholder co-design to improve medication safety.

Waldock, W.J., Gilchrist, M., Ashrafian, H. *et al.* A mixed methods evaluation of an antimicrobial prescribing clinical decision support system app. *npj Antimicrob Resist* **3**, 71 (2025). https://doi.org/10.1038/s44259-025-00146-8




*A Study Within A Trial (SWAT) is a methodological study which aims to generate new knowledge to improve the design and delivery of future trials.*

University of York: https://www.york.ac.uk/healthsciences/research/trials/swats/

ELSEVIER

Patient Education and Counseling 62 (2006) 260–270

Patient Education and Counseling

www.elsevier.com/locate/pateducou

# Patients or research subjects? A qualitative study of participation in a randomised controlled trial of a complex intervention

Ben Heaven [a,*], Madeleine Murtagh [b], Tim Rapley [a], Carl May [a], Ruth Graham [c], Eileen Kaner [a], Richard Thomson [b]

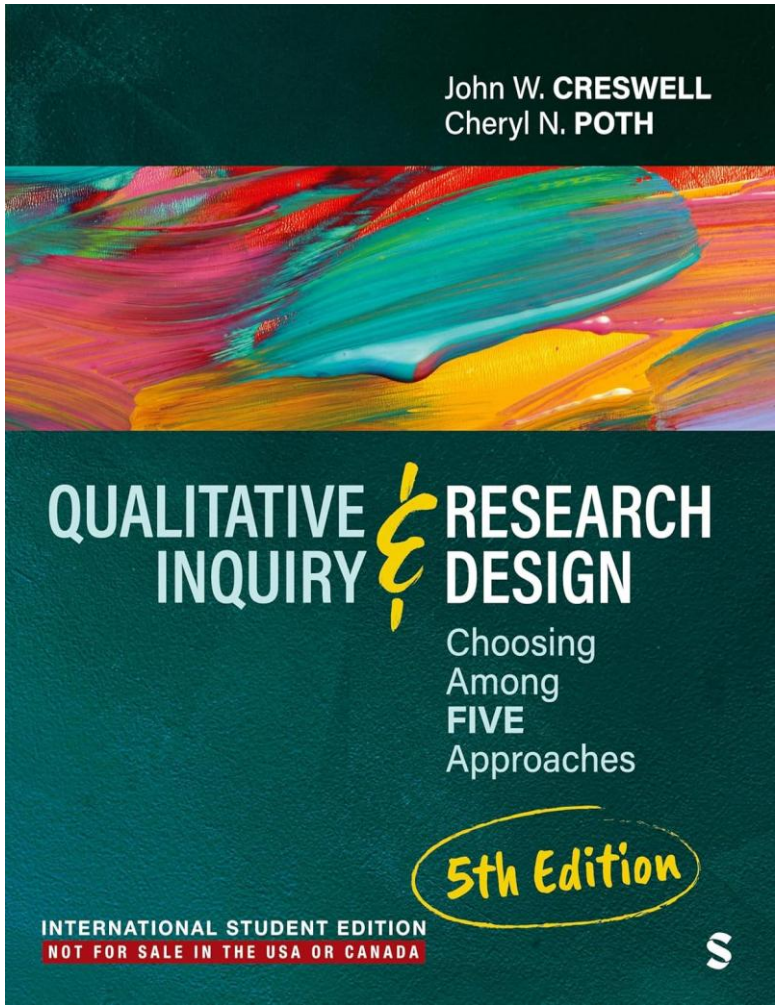
[a] *Health Technologies and Human Relations Research Group, Centre for Health Services Research, School of Population and Health Sciences, University of Newcastle upon Tyne, 21 Claremont Place, Newcastle upon Tyne, NE2 4AA, UK*

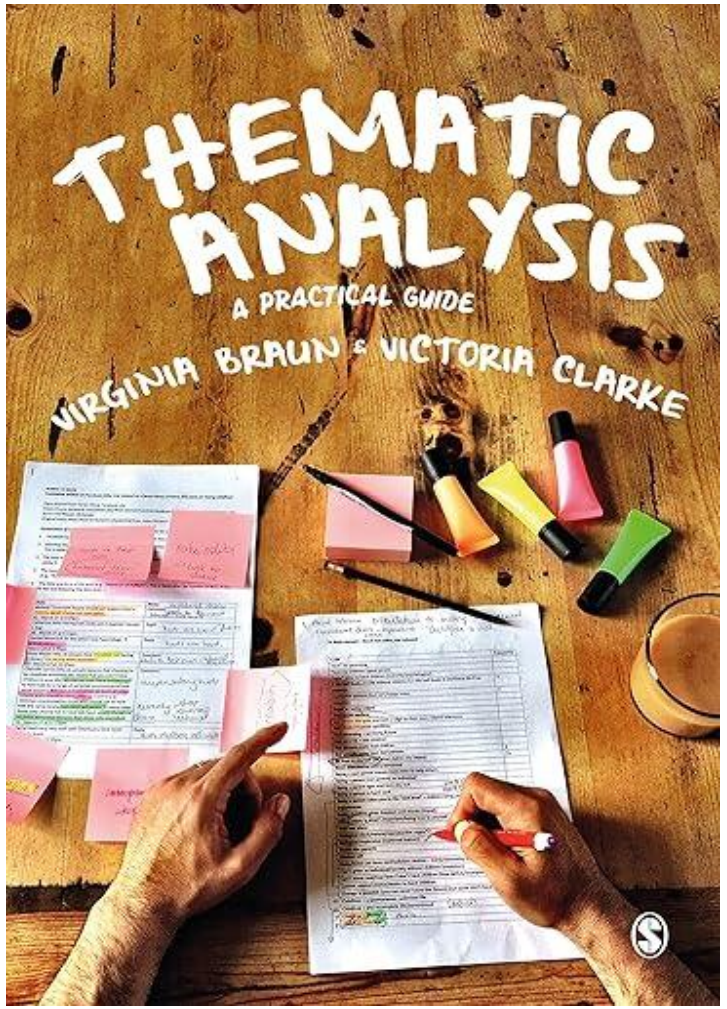
[b] *Public Health Research Group, School of Population and Health Sciences, University of Newcastle upon Tyne, William Leech Building, Newcastle upon Tyne, UK*

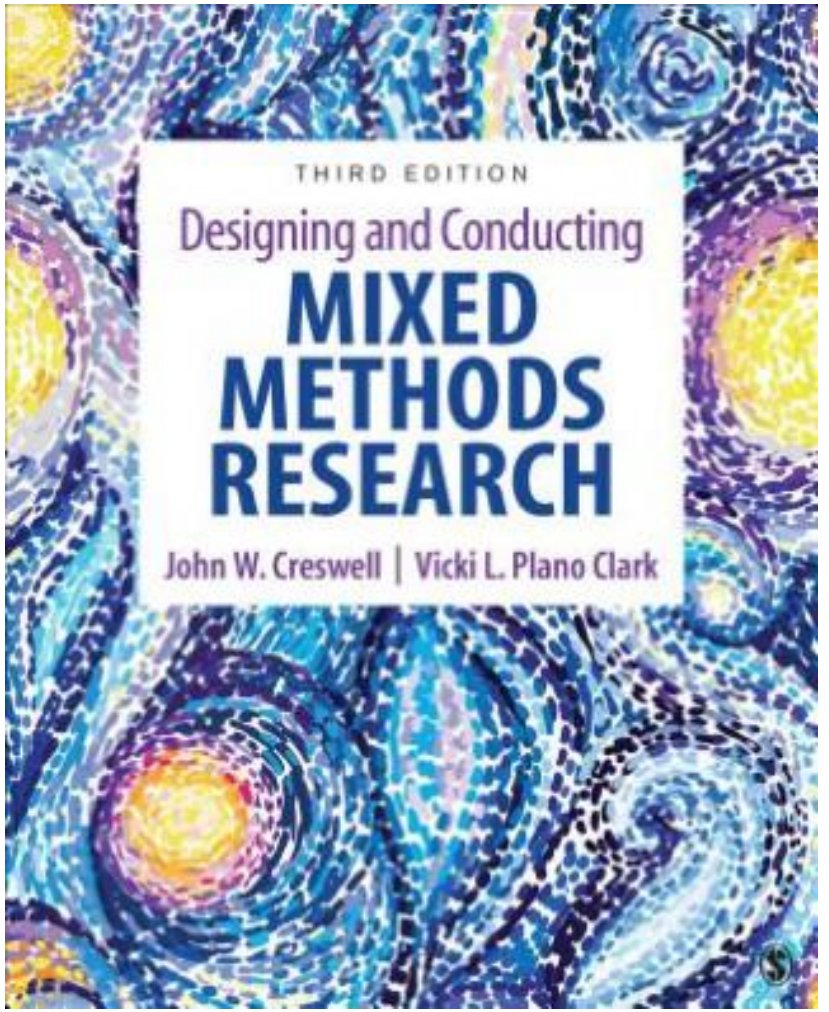
[c] *School of Surgical and Reproductive Sciences, University of Newcastle upon Tyne, William Leech Building, Newcastle upon Tyne, UK*

Received 20 April 2005; received in revised form 28 July 2005; accepted 29 July 2005

# Further reading

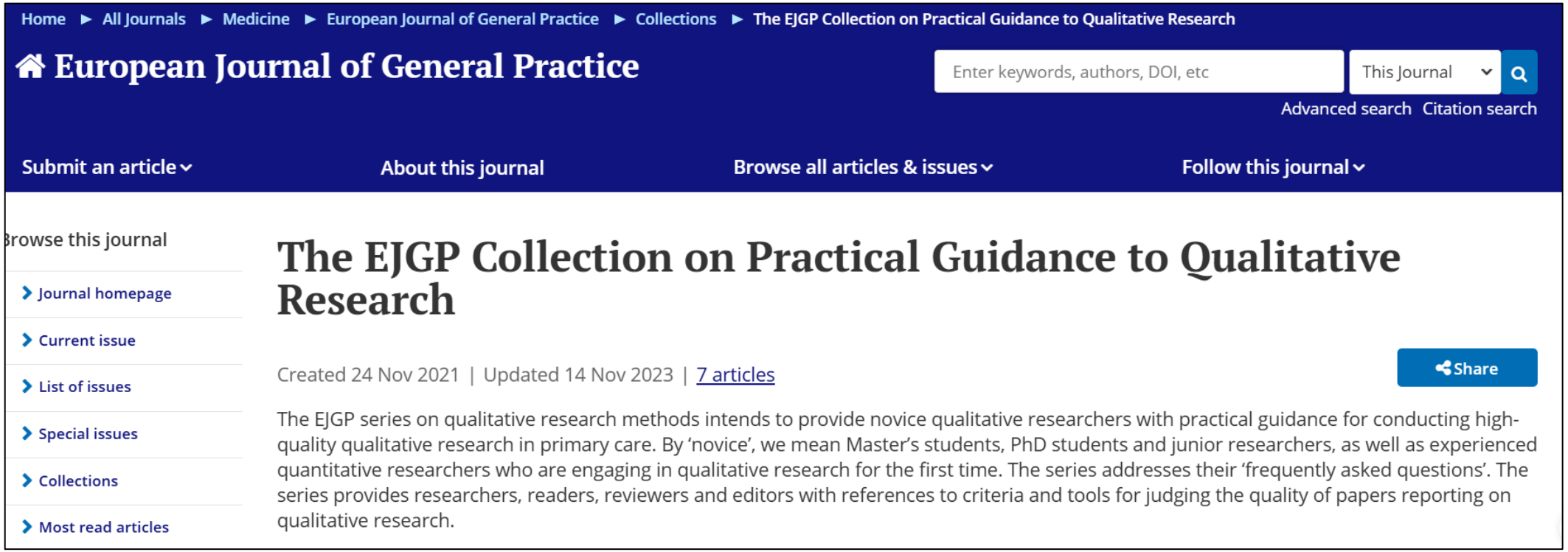


# Further reading

- **The EJGP Collection on Practical Guidance to Qualitative Research**
  - https://www.tandfonline.com/journals/igen20/collections/practical-guidance-to-qualitative-research



Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin

# Thank You