Applying qualitative research methods in health research

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Why do you want to learn about qualitative methods?

https://bham.padlet.org/jaunger2/why-do-you-want-to-learn-about-qualitative-methods-z7lo72i0ofbq73pd

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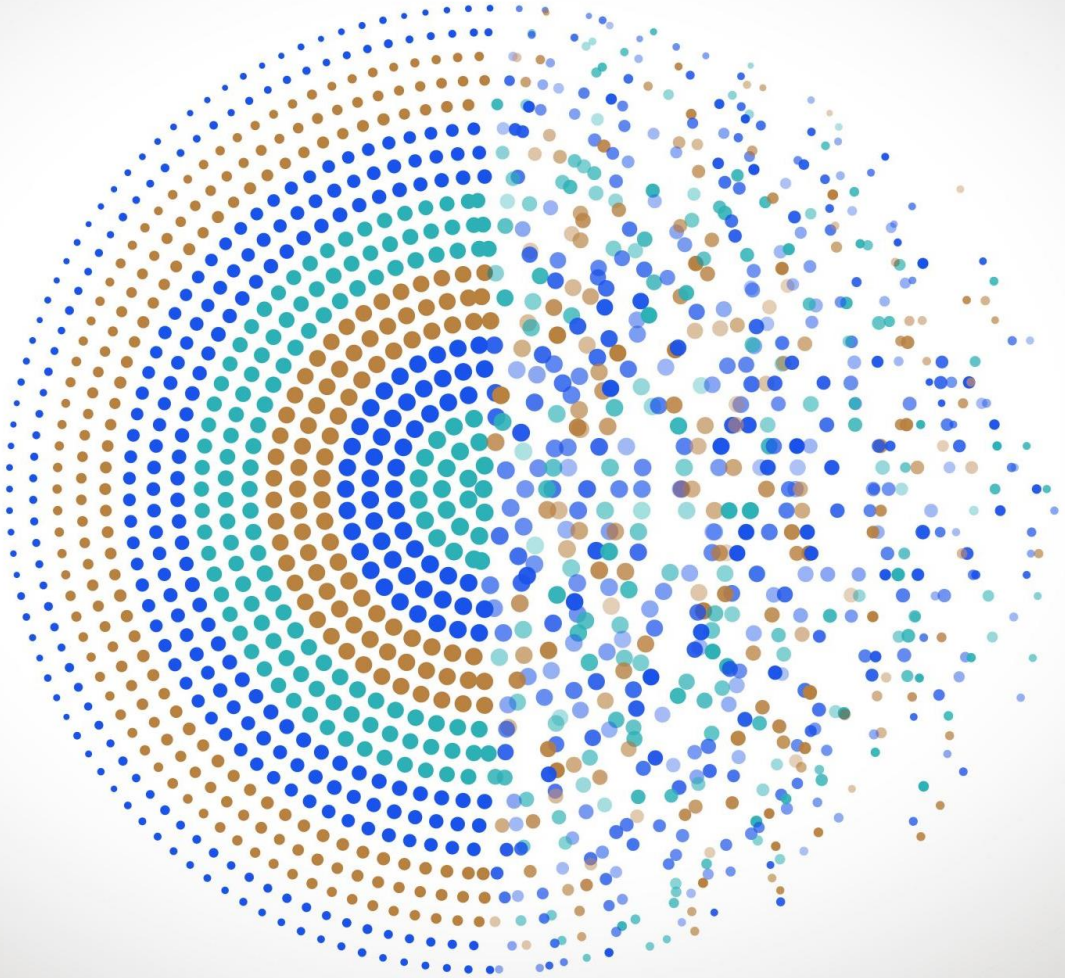

What is qualitative research?

Qualitative research is defined as *“the study of the nature of phenomena”,* including *“their quality, different manifestations, the context in which they appear or the perspectives from which they can be perceived”*, but excluding *“their range, frequency and place in an objectively determined chain of cause and effect”* [1].

Basically: focuses on words rather than numbers

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Why do qualitative research?

- **Experience** - Focuses on ‘lived experience’ rather than understanding an objective reality.
- **Perspectives** - Understands complexity by taking into consideration context via different perspectives.
- **Insight** - Studies behaviour in natural settings.
- **Flexibility** - Generally more flexible than purely quantitative research.
- **Exploratory** - Allows you to generate hypotheses that can be explored through quantitative research or with other methods.
- **Evaluation** - Can be important when evaluating or assessing feasibility of interventions.

Epistemologies and ontologies (study of knowledge and nature of reality)

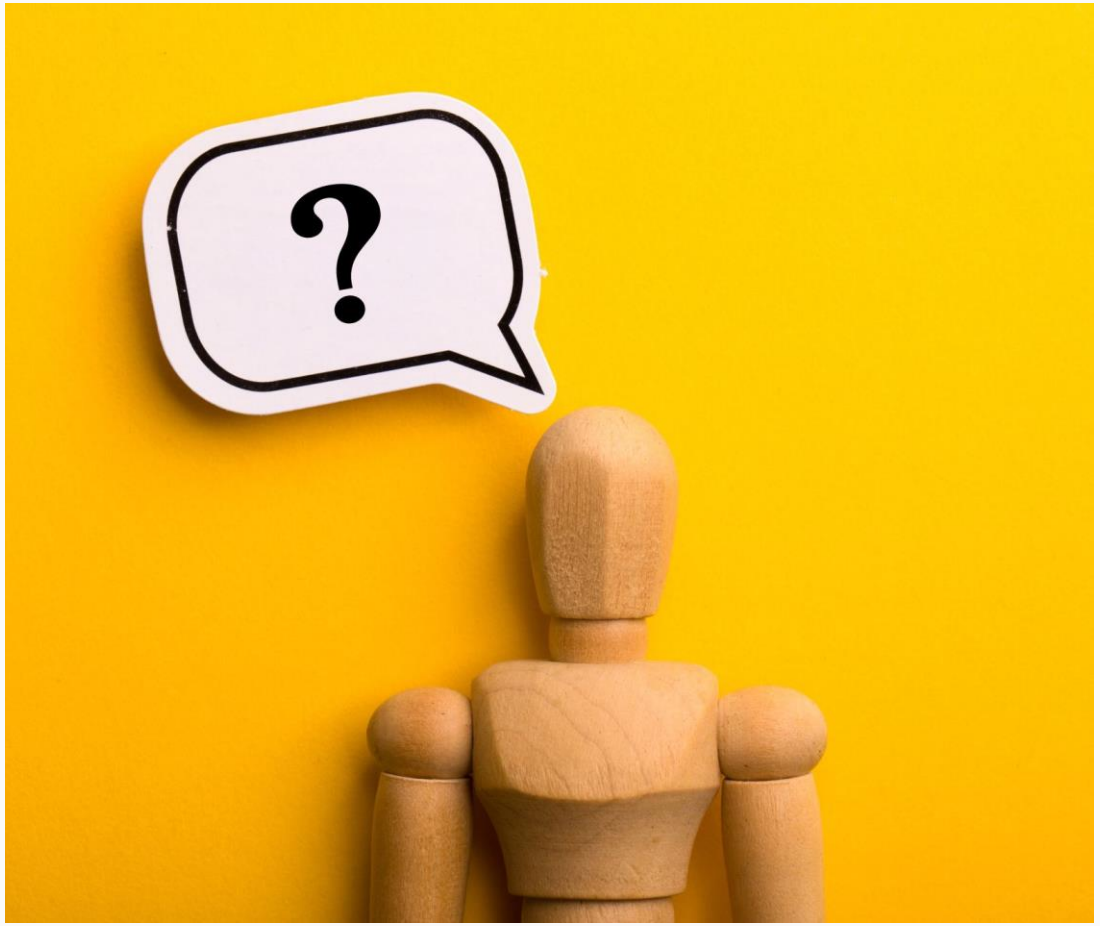
It can be important to consider what epistemological perspective your research is taking.

- **Constructivism** - knowledge is actively constructed by individuals through their experiences and interactions with the world. Phenomena are socially constructed.
- **Positivism** - knowledge can be gained through empirical observation and scientific inquiry. There is an objective reality that exists independently of human perception. *Often realm of quantitative research*.
- **Realism** - knowledge can approximate reality through observation and rational inquiry. Reality exists independently of human consciousness.

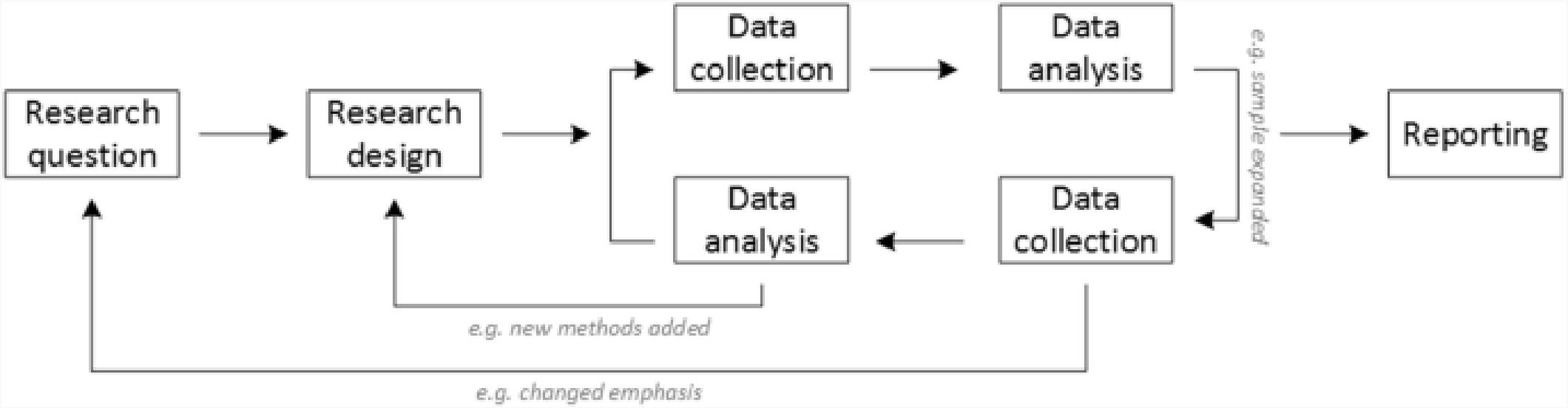
Qualitative research tends to be constructivist but not exclusively so.

Qualitative research questions

- Quantitative research questions typically ask “What” or “Does X work” questions… or sometimes “How”.
- Qualitative research often asks **how** or **why** phenomena occur.
  - E.g. research questions from a recent project:
    - “**Why** do healthcare staff behave unprofessionally towards each other?”
    - “**How** are interventions to reduce unprofessional behaviour between healthcare staff intended to work?”



Qualitative research processes can be less rigid



How can you collect qualitative data?

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What types of data collection can be used?

- Documentary analysis.
- Observations.
- Semi-structured interviews.
- Focus groups.
- Open-ended surveys.
- Audio or video recordings.
- Qualitative literature reviews using narrative synthesis – which can be systematic too.

How can I best sample my population?

- What is the purpose of sampling?
  - Finding a broad range of experiences/ opinions?
  - Building theories/ explanations?
- What is the rationale for this sampling strategy (methodology or pragmatism?)
  - Things to consider: target population, inclusion criteria, budget/resources, time, how data will be analysed, practicalities of data collection (e.g. length of interview), recruitment process.
- How do you find ‘richest sources’ of information?
  - Purposive sampling.

Need to draw on and use theory

- Philosophical theory - ontology/ epistemology (e.g. realism; constructivism): *outlines the researchers' standpoint & underlying beliefs*
- Methodological theory - (e.g. phenomenology; grounded theory): *provides focus for research and blueprint for methods*
- Discipline-based theory - (e.g. Health Belief Model, Behaviour Change Wheel): *influences or guides data collection / analysis*

What does qualitative analysis look like?

Looking for patterns within the data set.

- Thematic Analysis
- Grounded Theory analysis - inductive

Exploring how language is used to interpret/ construct the world (e.g. what is intended meaning)

- Narrative Analysis
- Discourse Analysis

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Example 1… Thematic analysis

- **Headline:** Method for analysis without ‘theoretical allegiance’ – inductive or deductive or abductive
- **Process:** 6-step structured process of developing and refining **themes**
- **May have:** Later version *reflexive*, less ‘theory neutral’, researchers need reflect on philosophical assumptions underlying ‘their’ version of TA (Braun & Clarke 2019)

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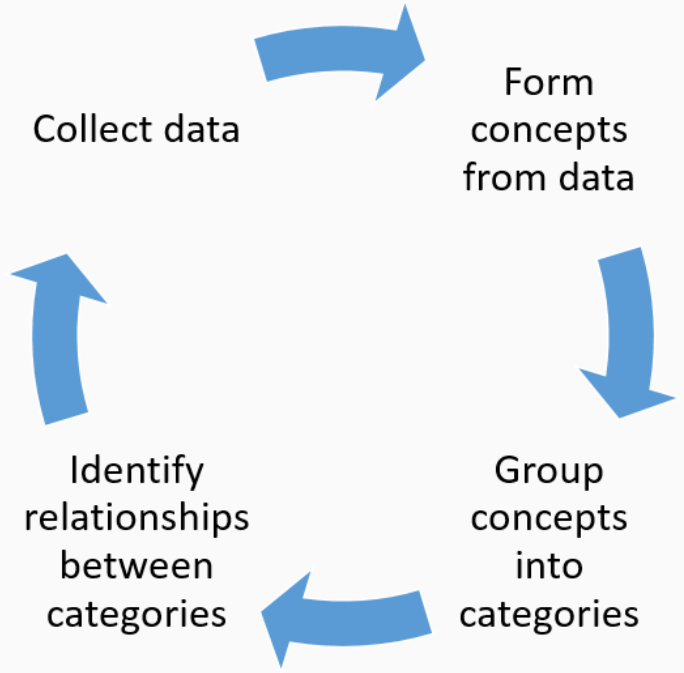
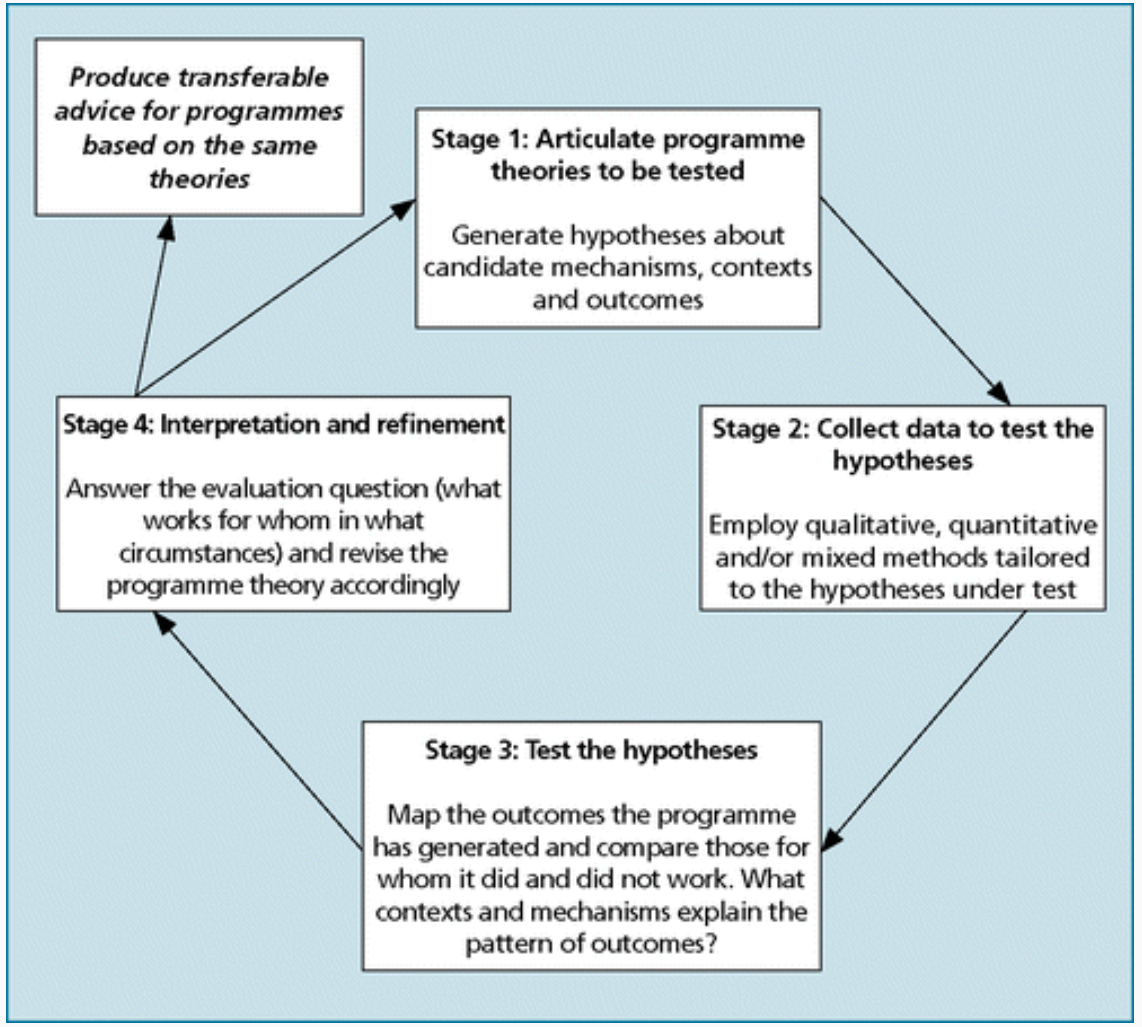
Example 2… Grounded theory

- **Headline:** **Developing** useful **theory** from qualitative data (‘grounded’ in data)
- **Process:** Inductive process where data collection and analysis are driven by developing theory
- **May have:** Structured approach to coding and memo-writing during analysis



Example 3… Use of qualitative data in other research: realist methods

- Based on critical realist ontology.
- Realist methodology seeks to understand how an **intervention** might work differently in different contexts.
- It seeks to **generate theories** about “what works, why, and for whom”
- Comprises realist synthesis (literature) and realist evaluation (case studies).



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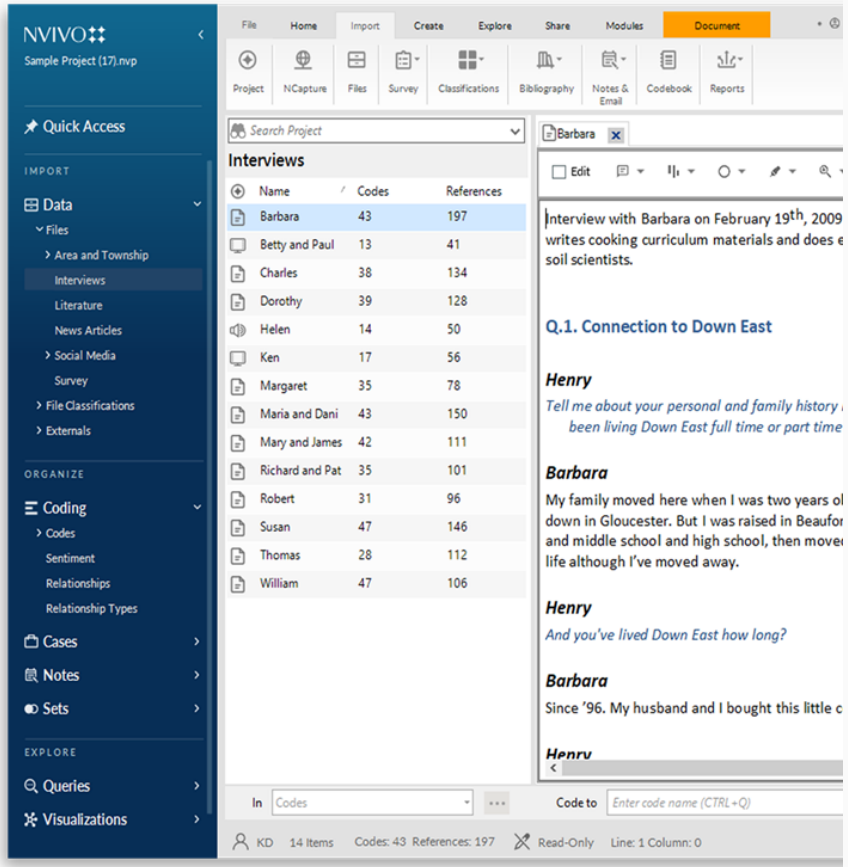
What software can I use to aid in qualitative analysis?

- NVivo is commonly used to organise various forms of ‘qualitative data’ including interview transcripts, documents, video and audio content, and more.
- Data in NVivo are structured in codes that allow you to create and analyse themes and sub-themes, for example.
- It is worth learning to use NVivo if you are interested in doing qualitative research.



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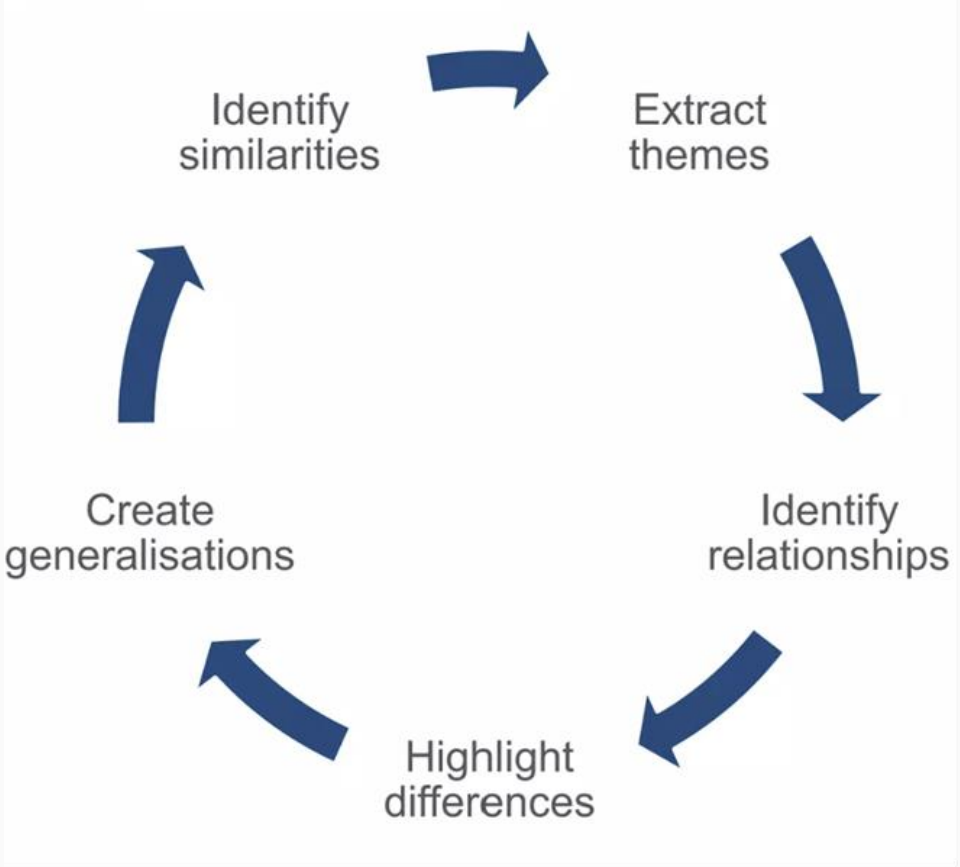
What software can I use to aid in qualitative analysis?

- Does not do analysis for you.
- Supports multiple types of analysis (e.g. grounded theory, realist research, thematic analysis).
- Use of NVivo can increase transparency and makes it much easier to go back and quote specific data.



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Challenges with qualitative research

What challenges do you think there might be with qualitative research?

Go into breakout rooms for 5 minutes to think about some of the issues,
and ***appoint a person to report back to the group***

Challenges with qualitative research

- Qualitative research often does not provide a single answer
- There can be conflicting answers which both can often be valid
- Subjectivity plays a major role (even if we can try to eliminate it)
- Bringing together different sources of data can be difficult
- Data are not ‘scalable’

- Internal validity - credibility

- External validity – transferability

Improving credibility

Are studies:

- Underpinned by theory, applied properly?
- ‘Making sense’ immediately (face validity…)?
- From reputable sources (but not a guarantee)?
- Well written and easy to follow?
- Using excerpts (quotes) to make a compelling case
- Using established well-evidenced methodologies?
- Consider formal appraisal.

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Improving external validity

Consider:

- Comparisons to other research in other contexts
- Use of stakeholder groups into research analysis or to sense-check findings
- How representative is the sample?
- Does it use triangulation and other data sources?
- Have results been ‘presented back’ to stakeholders/participants?
    - Aka ‘member checking’ or ‘teacher-learner cycle’.
- Is it likely the authors reached ‘saturation’?

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Saturation

"Saturation means that no additional data are being found whereby the sociologist can develop properties of the category." Glaser and Strauss (1967: p. 61).

- The point in coding when you find that no new codes occur in the data.
- Suggests a clear timepoint (no new codes/ themes/ theory emerge) rather than a process

Models of saturation and their principal foci in the research process

Model	Description	Principal focus
Theoretical saturation	Relates to the development of theoretical categories; related to grounded theory methodology	Sampling
Inductive thematic saturation	Relates to the emergence of new codes or themes	Analysis
A priori thematic saturation	Relates to the degree to which identified codes or themes are exemplified in the data	Sampling
Data saturation	Relates to the degree to which new data repeat what was expressed in previous data	Data collection

Problems:

- Glosses over differences in methodology / approach (e.g. used to develop theory? What type of analysis is used?)
- Often used ‘defensively’ with little explanation to get past gate keepers

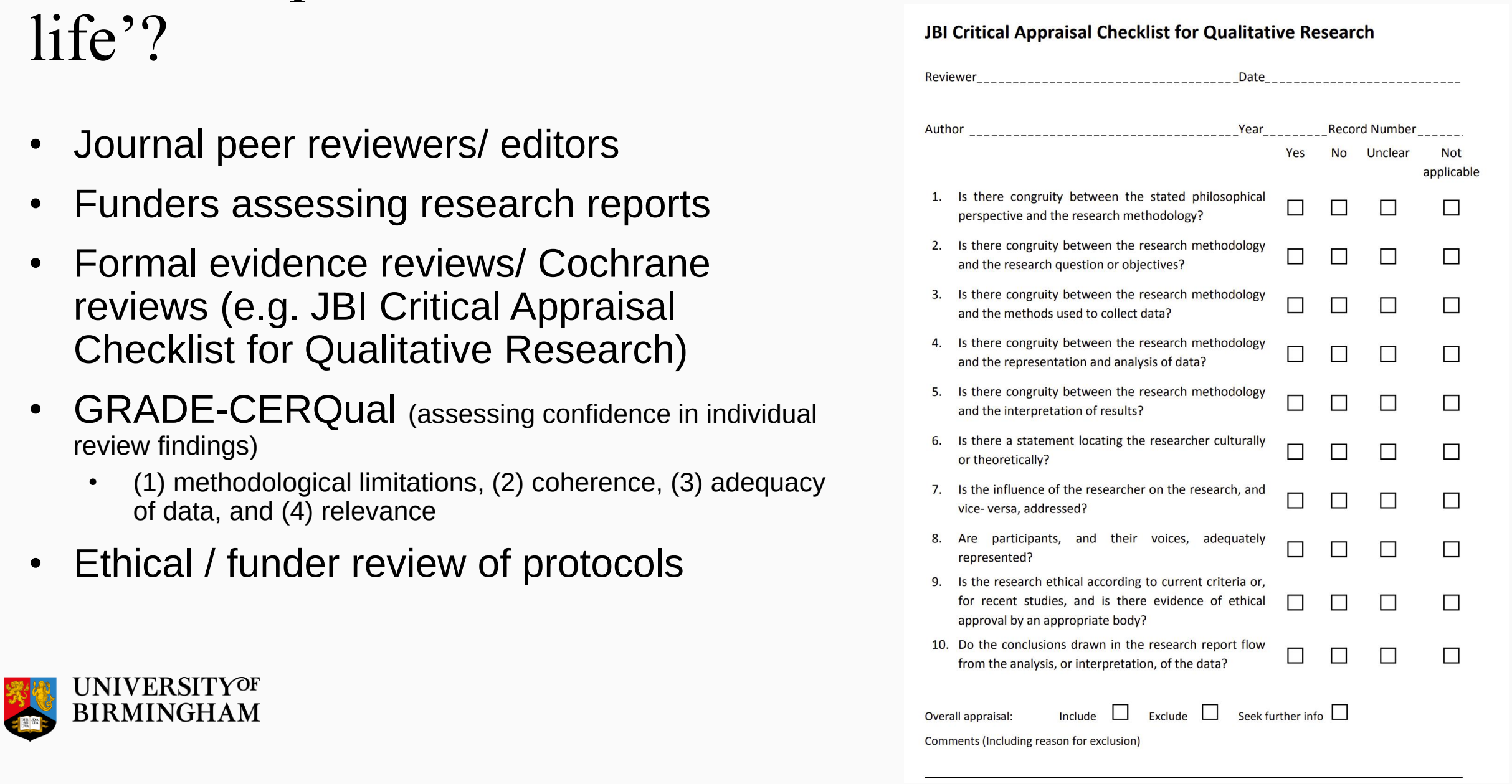
Saunders B, Sim J, Kingstone T, Baker S, Waterfield J, Bartlam B, Burroughs H, Jinks C. Saturation in qualitative research: exploring its conceptualization and operationalization. Qual Quant. 2018;52(4):1893-1907. doi: 10.1007/s11135-017-0574-8. Epub 2017 Sep 14. PMID: 29937585; PMCID: PMC5993836.

Triangulation

- Data triangulation involves looking at/collecting data from a number of perspectives:
  - Data is collected in a variety of ways (interview and focus groups), analysed and compared.
  - The same dataset is coded by a number of different people, and each coding is compared.
  - A completed analysis is reviewed and revised by other researchers.
- However, this requires transparency on **how** data are compared
- Triangulation can also be used to bring together quantitative and qualitative data (methodological triangulation).
  - Are conclusions from data the same or explainable by one another?

How are qualitative studies assessed in 'real life'?

- Journal peer reviewers/ editors
- Funders assessing research reports
- Formal evidence reviews/ Cochrane reviews (e.g. JBI Critical Appraisal Checklist for Qualitative Research)
- GRADE-CERQual (assessing confidence in individual review findings)
  - (1) methodological limitations, (2) coherence, (3) adequacy of data, and (4) relevance
- Ethical / funder review of protocols



JBI Critical Appraisal Checklist for Qualitative Research

Reviewer_____Date_____

Author _____Year_____Record Number_____

		Yes	No	Unclear	Not applicable
1.	Is there congruity between the stated philosophical perspective and the research methodology?	☐	☐	☐	☐
2.	Is there congruity between the research methodology and the research question or objectives?	☐	☐	☐	☐
3.	Is there congruity between the research methodology and the methods used to collect data?	☐	☐	☐	☐
4.	Is there congruity between the research methodology and the representation and analysis of data?	☐	☐	☐	☐
5.	Is there congruity between the research methodology and the interpretation of results?	☐	☐	☐	☐
6.	Is there a statement locating the researcher culturally or theoretically?	☐	☐	☐	☐
7.	Is the influence of the researcher on the research, and vice- versa, addressed?	☐	☐	☐	☐
8.	Are participants, and their voices, adequately represented?	☐	☐	☐	☐
9.	Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?	☐	☐	☐	☐
10.	Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?	☐	☐	☐	☐

Overall appraisal: Include ☐ Exclude ☐ Seek further info ☐

Comments (Including reason for exclusion)

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Can you think of some barriers to proper reporting of qualitative studies?

Barriers can include

- Lack of consensus on guidelines/standards for reporting studies.
- Subjective analysis methods.
- Complexity - low maximum word counts in journals reducing richness of reporting.
- Peer reviewers not qualitative experts but nonetheless review studies.
- Defensive use of methods.
- Resistance from certain academic journals.

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Worked example

PLOS ONE

RESEARCH ARTICLE

How, when, and why do inter-organisational collaborations in healthcare work? A realist evaluation

Justin Avery Aunger[1,2]*, Ross Millar[2], Anne Marie Rafferty[3], Russell Mannion[2], Joanne Greenhalgh[4], Deborah Faulks[5], Hugh McLeod[6]

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Check for updates

Abstract

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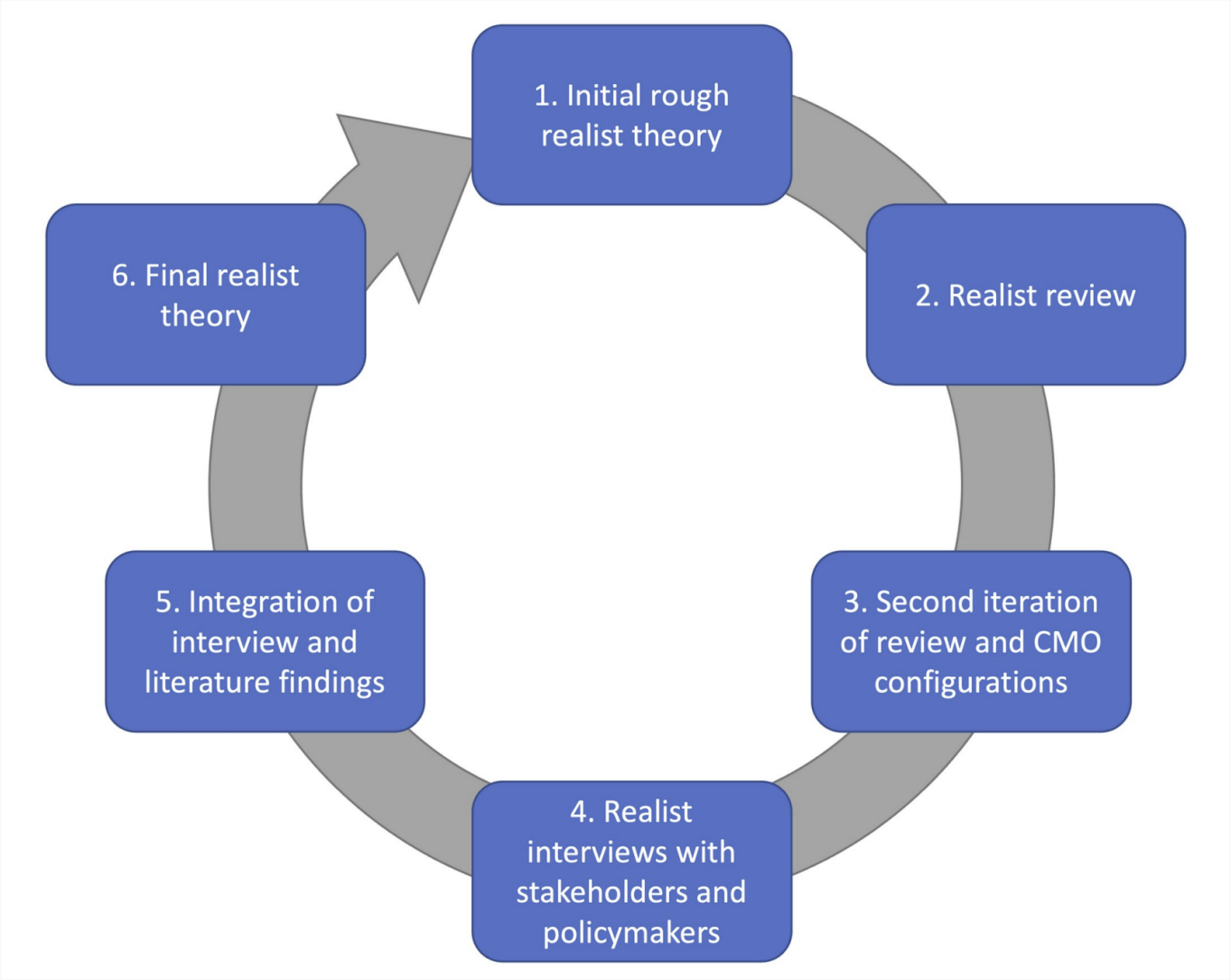
Aunger JA, Millar R, Rafferty AM, Mannion R, Greenhalgh J, Faulks D, et al. (2022) How, when, and why do inter-organisational collaborations in healthcare work? A realist evaluation. PLoS ONE 17(4): e0266899. https://doi.org/10.1371/journal.pone.0266899

Worked example



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Worked example

- The final sample comprised 32 interviews with 29 participants and one focus group with eight participant representatives.
- Interviews drew on realist interview methodology, with the focus on confirming, falsifying, and refining theory.
- Teacher-leaner cycle was used to ‘test’ theories from different perspectives.
- Analysis was performed in NVivo 12 software.
- Aim was to produce a final, refined programme theory.

How I tried to improve validity

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Table 2. Description of mechanisms underlying collaborative functioning, whether they are novel or not, their degree of evidence, what refinements were made, and a supporting quotation.

Mechanism	Definition	Novelty/affirmation relative to existing middle-range theory and degree of evidence*	Key refinements (for aspects present in prior theory and if made)	Illustrative quotation
Collaborative vs. competitive behaviour	A move from competitive organisational behaviours to collaborative ones	Affirmed—Moderate level of evidence in interviews	Interviewees mentioned simultaneous drivers to compete and collaborate at any given time	*"It's felt, I suppose, being actively involved as if we're meant to be collaborating with each other and competing with each other at the same time."* (01; Academic & Hospital Group Director; Range)
Trust and initial trust	*"A psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behaviour of another"* [38]. Initial trust is trust that is manifested as a result of pre-existing contextual factors	Affirmed—Significant evidence in interviews	A perception of loss of organisational sovereignty as a context reduced trust as a mechanism, forming a new CMOC. Mistrust of regulators also formed a new CMOC.	"*So, trust is hugely at the heart of this because you have to trust that, you know, once you've agreed what you're doing that people will do what they've said they're going to do*" (26; Head of Workforce; Alliance 1)
Interpersonal communication	The communication and sharing of information, which supports relationship-building	Affirmed—Significant evidence in interviews	n/a	*"So it's a whole lot of things that you learn. Where it doesn't work the best, or it fails, is down to communication, understanding and that lack of awareness."* (24; Director of Care Quality—Charity Sector; Range)
Risk tolerance	How much risk an organisation is willing to take on with a collaborator; an organisation must be willing to engage in behaviour that could be taken advantage of by their partner	Affirmed—Moderate evidence in interviews	n/a	*"Because I think one of the things that all providers will find quite hard that they will have to do is sometimes they'll have to let go of things. That, probably, isn't necessarily what they would perceive as the best thing for their organisation. Yeah, but it probably is the best thing for patients across [Mid-UK area] in the round. And I think all organisations will probably have to give a little on some things."* (26; Head of Workforce; Alliance 1)

task complexity in line with our prior CMOCs. One interviewee said: *"if there's energy there, I'm less concerned about the complexity of what people need to do because they'll work it out"* and they went on to emphasise the key ingredients for collaboration: *"So you've got trust, you've got energy."* (21; Director of Clinical Service; Merger). This suggests that having faith in a collaboration means that those involved would be willing and able to work through any complexities that emerged.

Another aspect confirming our prior CMOCs, was the notion that overpromising (stating that something could be accomplished that is not realistically achievable) could reduce faith, and that staff turnover could also have a negative impact. For example, the following leader illustrated the impact of overambition on faith:

> *". . . that's the sort of thing which is too big, too contentious, is going to take you too long and you're going to be five or six years into this not really feeling like it's actually delivered anything and that's when people are going to go, 'Why are we. . .? We've not seen any outcome from this so what are we doing?'"*
>
> (19; Director; Alliance 2)

Contrasting interview with literature findings

This study has enhanced our understanding of the factors underpinning the effective functioning of IOCs, including the key mechanisms and contextual factors, and how these interact to form a chain of generative causation. Likewise, this study sheds light on which leadership attitudes and behaviours support (such as being empathetic and showing vulnerability) or constrain (e.g., through a lack of accountability) the maintenance and development of IOCs, as well as the impact of regulation on the functioning of IOCs. These were able to bridge gaps in understanding in our prior theory [3, 15]. As a result, the majority of the CMOCs and their underlying mechanisms were affirmed and no outright refutations were identified (Table 2), strengthening the findings of our prior review. Several new CMOCs were formulated and outlined throughout this article, which interacted with the existing mechanisms. This study also made clear just how complex and interconnected many of these mechanisms are—with culture and leadership, while both being aspects of *how* collaborations function, also becoming linked into collaborative performance.

The findings in context

Two prior realist evaluations [24, 27] likened the link between collaborative functioning and performance to the concept of 'synergy'—which we sought to make more tangible in this study and wider project. From our perspective, it has been more helpful to perceive the output of collaborative functioning as a scale between degrees of competitive and collaborative organisational behaviour depending on the levels of trust, risk tolerance, and faith. These prior realist evaluations also proposed similar concepts to those mechanisms we identified, including "motivation to engage" as an analogue to our notion of 'faith' [24]. Another recent systematic review of reviews sought to determine 'shaping factors' of how cross-sector healthcare collaborations work, but did not utilise a full realist methodology [16]. It identified resources and capabilities (such as organisational capacity), motivation and purpose (including shared vision, unrealistic aims, competing aims, national policies, and commitment), relationships and cultures

Supplementary File 2 – Collaborative Functioning Coding Structure

Coding structure

Name
Deductive
Impact of regulation
Competition requirements
Covid-19
Enforced changes
Inspections and CQC
Regulation effect on trust
Inertia vs. performance
Leadership skills
Bad qualities
Lack of accountability
Missing actor
Resistance to change
Good qualities
Commitment

Summary

- Qualitative research enables rich insights into social and behavioural phenomena.
- It answers questions that quantitative research cannot.
- It has limitations such as subjectivity and lack of scalability.
- It is useful to know how to appraise reports of qualitative research.

Any questions or comments?

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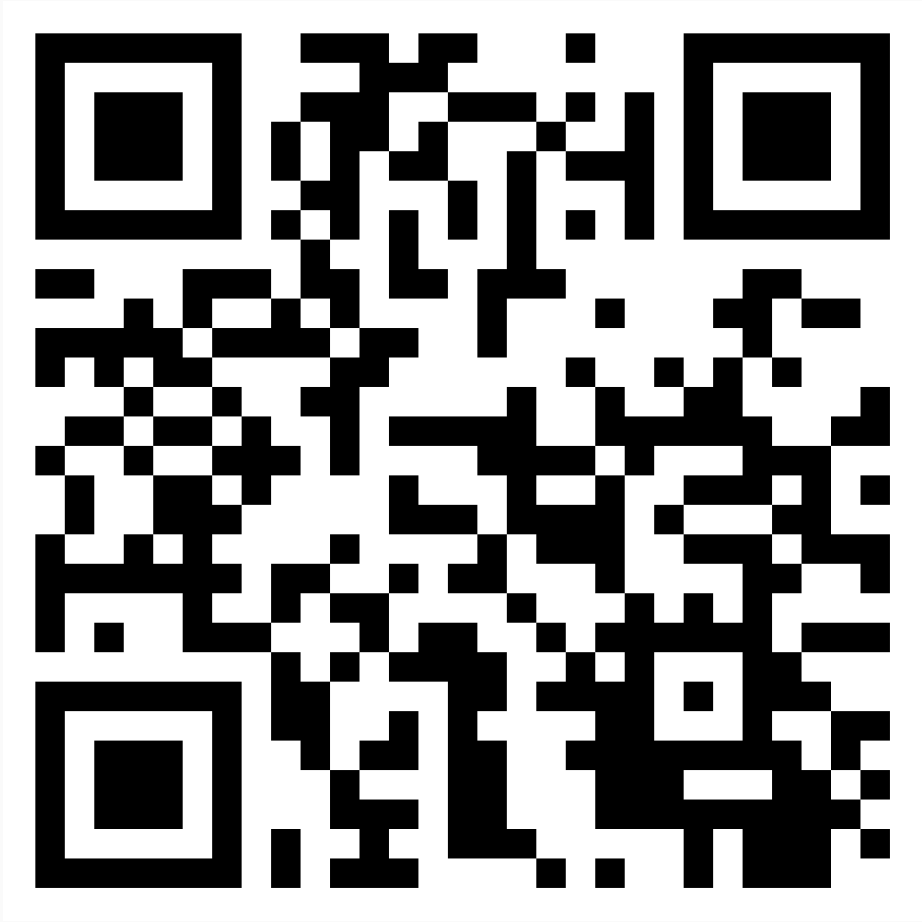
What did you find most interesting from this session?

https://bham.padlet.org/jaunger2/what-did-you-find-most-interesting-from-this-session-c5j0m9hutcl0ybm4



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