

Systematic reviews of qualitative studies



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Have you....



- Carried out primary qualitative research?
- Carried out a systematic review of qualitative research?
- Used results from qualitative research in a decision making process or a research project?



What is the aim of qualitative research?



- To *describe* the social world
- To *understand* people's underlying reasons, opinions, motivations
- To *explain* the social world by developing hypotheses, theories or models

Common methods



- Focus group interviews
- Individual interviews
- (Participant) observations
- Document analysis

What is the aim of systematic reviews of qualitative research (qualitative evidence synthesis)?



- Like primary qualitative research, qualitative evidence syntheses aim to:
 - *describe* the social world
 - *understand* people's underlying reasons, opinions, motivations
 - *explain* the social world by developing hypotheses, theories or models

How do qualitative evidence syntheses differ from reviews of effectiveness?



Systematic search
for all relevant
qualitative studies



Data extraction and
quality assessment
of included studies



Synthesis of the
results of these
studies



Qualitative evidence syntheses increasingly common...



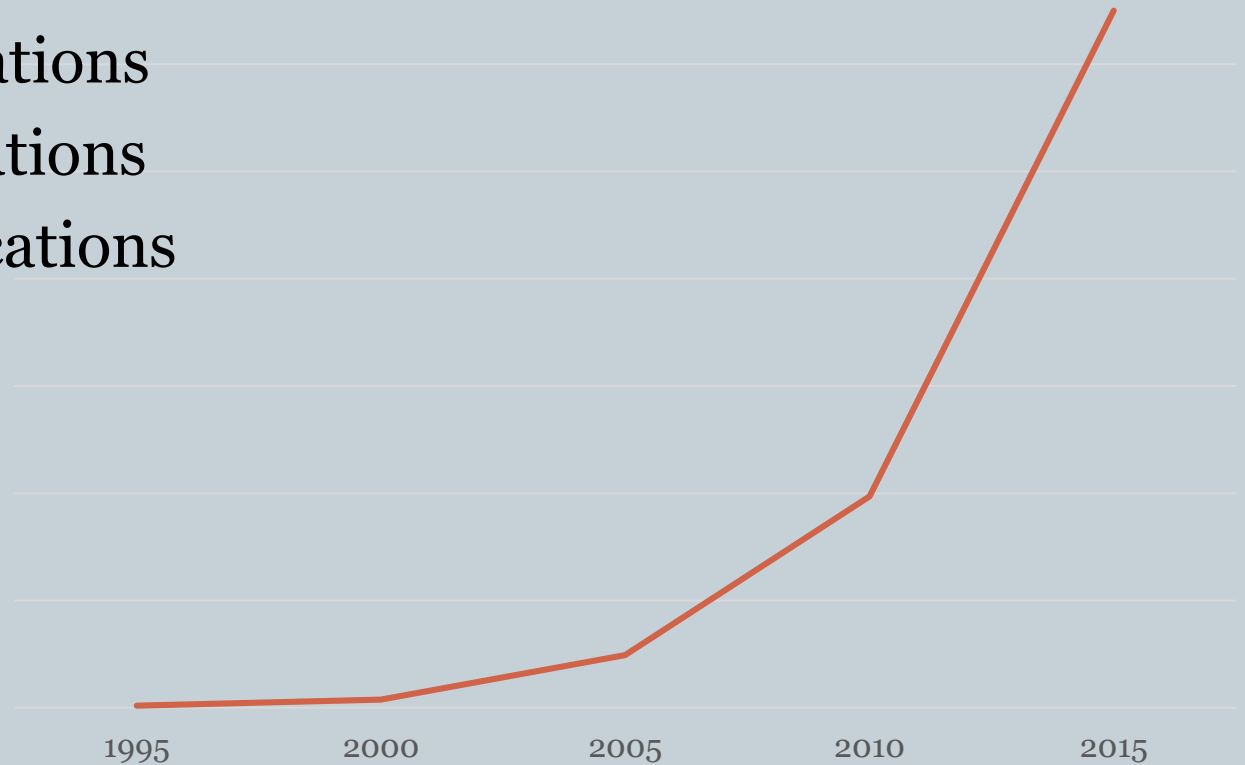
1995: 10 publications

2000: 38 publications

2005: 245 publications

2010: 985 publications

2015: 3250 publications



Research about sickness and health – where does qualitative evidence fit in?



How many people
have this health
condition?
(*prevalence*)

Why do some
people get this
condition while
others do not?
(*etiology*)

How can we decide
if someone has this
condition?
(*diagnostics*)

What happens to
people who have
this condition?
(*prognosis*)

How do people
experience this
condition?
(*attitudes and
experiences*)

What can we do to
treat or prevent this
problem?
(*effect of
interventions*)

Healthcare guidelines – where does qualitative evidence fit in?



Is the treatment *effective* and does it have *side-effects*?

How much will the treatment *cost*?

Will this treatment be *acceptable* to people?

Will this treatment be *feasible* to implement?

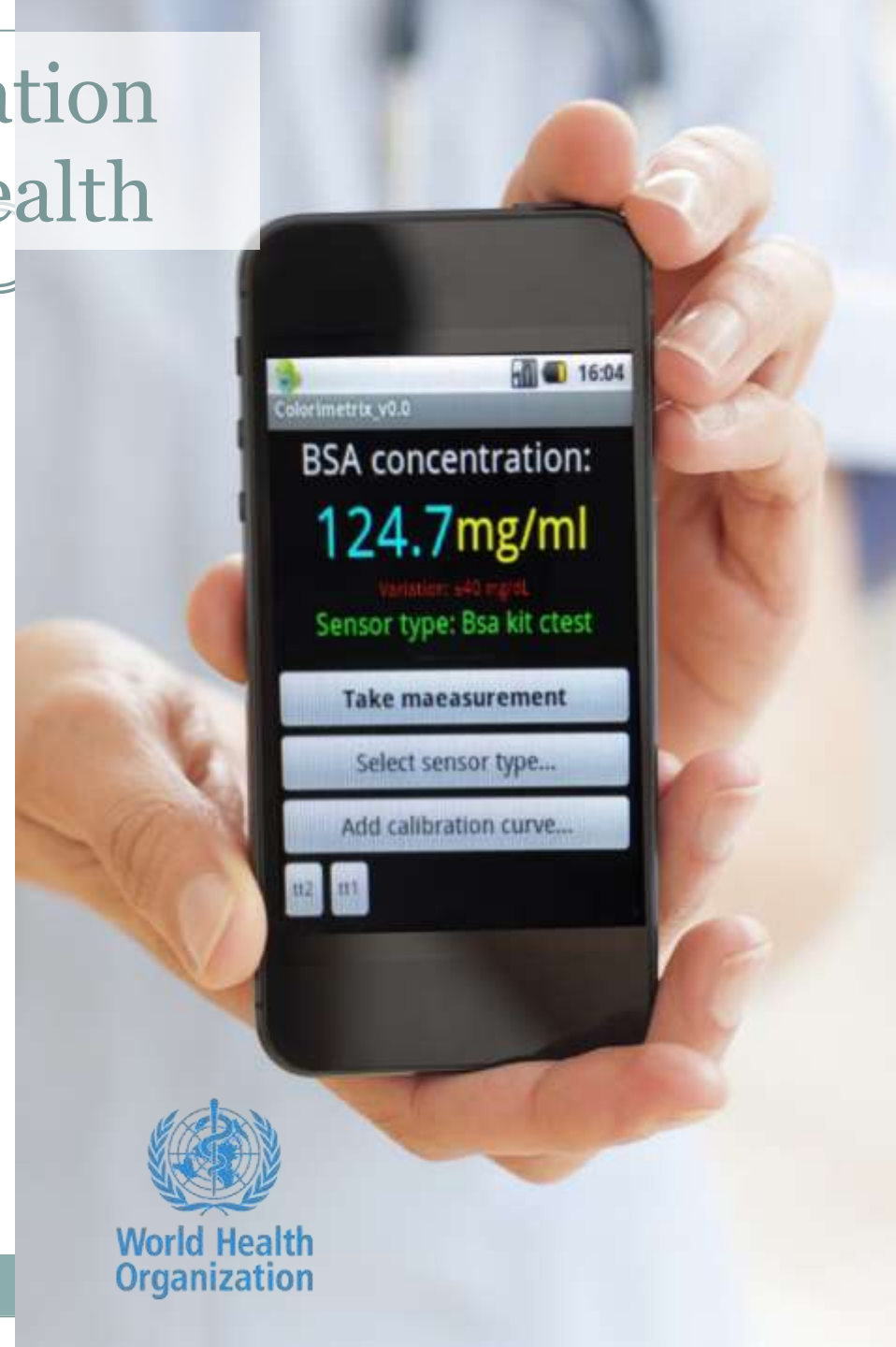
Will this treatment increase or decrease *equity*?

World Health Organization guidelines on digital health

Use of mobile phones for:

- Communicating with patients and the public
- Telemedicine
- Healthcare worker training
- Decision support for healthcare workers

Increasingly popular. But what should be recommended?



World Health
Organization

Example: targeted client communication via mobile phone

- Giving information by mobile phone, for example:
 - health promotion messages
 - reminders about health services
 - diagnostic results



Example: targeted client communication via mobile phone

- Adolescents and sexual/reproductive health
- Adults and sexual/reproductive health
- Pregnant women and postpartum women
- Parents of children under 5



Targeted client communication via mobile phone: what effect does it have..



...on healthcare utilisation, health status, health behaviour?

Systematic review of effectiveness (Palmer et al 2018):

- Adolescents:
 - evidence of very low certainty or completely missing
- Other target groups: mixed effects / missing evidence:
 - probably some benefits for some outcomes
 - may make little or no difference to others
 - many outcomes - not measured or low certainty

Targeted client communication via mobile phone: Resource use

No systematic review commissioned. Information based on expert opinion:

- Large start-up costs and large recurring costs

Targeted client communication via mobile phone: do people find it acceptable?

- *Systematic review of qualitative research (Ames et al 2018):*
- Many clients **positive** to these services (moderate confidence):
 - Provides them with support and connectedness
 - Feels like someone is interested in their situation and cares about them
 - Gives a sense of direction, reassurance



Targeted client communication via mobile phone: do people find it acceptable?

- ...however, clients who are dealing with health conditions that are often stigmatised or very personal (e.g. HIV, family planning and abortion care) **worry that their confidential health information will be disclosed** (high confidence)



Targeted client communication via mobile phone: do people find it acceptable?



People's perceptions and experiences influenced by message's:

- Cost (*high confidence*)
- Content (*moderate confidence*)
- Frequency, timing (*moderate confidence*)
- Delivery channel (*moderate confidence*)
- Sender (*moderate confidence*)
- Length and language (*low confidence*)
- Tone (*low confidence*)

Targeted client communication via mobile phone: is it feasible?

Systematic review of qualitative research (Ames 2018):

- Problems in many settings with network connectivity, access to electricity, system integration and device usability (*high confidence*)
- Problems with clients who regularly change their phone numbers or clients who have poor access to phones (*low confidence*)



Targeted client communication via mobile phone: what is the impact on health equity?



- Are certain groups of people likely to be disadvantaged in relation to this service?
- *Systematic review of qualitative research (Ames 2018):*
- Communicating with health services via mobile phone may be particularly helpful to clients **with caring or work responsibilities, clients who live far from health facilities and clients with few funds** (low confidence)

Targeted client communication via mobile phone: what is the impact on health equity?



- ...access to these services may be particularly difficult for:
 - People with **poor access to network or electricity** (*high confidence*)
 - People with **stigmatised health conditions** (concern about confidentiality issues (*high confidence*))
 - People who speak **minority languages** or who have **low literacy skills or low digital literacy skills** (*moderate confidence*)
 - People with **poor access to mobile phones**, particularly **women and adolescents**, who have to share or borrow a phone or who have access to phones controlled by others (*moderate confidence*)

Making the recommendation



The panel assessed the evidence:

- Effectiveness unclear / mixed
- Large costs
- Widespread acceptability, but important conditions/exceptions
- Feasibility challenges
- Equity implications mixed



Targeted client communication via mobile phone: what did the panel recommend?



Conditional recommendation: The intervention was recommended under the condition that potential concerns about sensitive content and data confidentiality can be addressed.

Implementation considerations: Implementers should:

- secure data confidentiality and informed consent
- ensure access to network connectivity and electricity
- ensure that the content, format and delivery of information meets the needs of different target groups
- involve stakeholders in the design of the programme

Exercises



Carrying out a qualitative evidence synthesis



- Stage 1: Formulating the question
- Stage 2: Searching for the evidence
- Stage 3: Critically appraising the evidence
- Stage 4: Synthesising the evidence
- Stage 5: Assessing confidence in the findings

New WHO-AFRO Guidelines



- Communication interventions to inform and educate caregivers on routine childhood vaccination in the African Region



New WHO-AFRO Guidelines



Recommendations about the use of:

- face-to-face communication directed to parents or caregivers and intended to inform and educate about routine childhood vaccination
- community-aimed communication intended to inform and educate about routine childhood vaccination



New WHO-AFRO Guidelines



- How effective are these interventions?
- What resources will they require?
- How acceptable are they to parents, the community, and health workers?
- How feasible are they to implement at scale?
- Reviews commissioned to answer these questions



Exercise



- Develop a systematic review of qualitative research (“*qualitative evidence synthesis*”) to explore the acceptability and feasibility of communication about routine childhood vaccination for parents of young children

Stage 1: Formulating the question



- Develop a systematic review of qualitative research (“*qualitative evidence synthesis*”) to explore the acceptability and feasibility of communication about routine childhood vaccination for parents of young children
- SPICE:
 - **Setting** (Where? in what context?)
 - **Population or Perspective** (For whom?)
 - **Intervention** (What?)
 - **Comparison** (What else?)
 - **Evaluation** (How well? What result?)
- SPIDER (Sample, Phenomenon of Interest, Design, Evaluation, Research type).

Stage 1: Formulating the question



- **Setting:** Global
- **Population/Perspective:** Parents and informal caregivers* of children under 6
- **Intervention:** Communication about routine early childhood vaccination
- **Comparison:** None
- **Evaluation:** Views and experiences

Review already published



Parents' and informal caregivers' views and experiences of communication about routine childhood vaccination: a synthesis of qualitative evidence (Review)

Ames HMR, Glenton C, Lewin S

Ames HMR, Glenton C, Lewin S.
Parents' and informal caregivers' views and experiences of communication about routine childhood vaccination: a synthesis of qualitative evidence.
Cochrane Database of Systematic Reviews 2017, Issue 2. Art. No.: CD011707.
DOI: 10.1002/14651858.CD011707.pub2.

www.cochranelibrary.com

Parents' and informal caregivers' views and experiences of communication about routine childhood vaccination: a synthesis of qualitative evidence (Review)
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How did the authors formulate the question?



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OBJECTIVES

The specific objectives of the review were to identify, appraise and synthesise qualitative studies exploring:

- Parents' and informal caregivers' views and experiences regarding communication about childhood vaccinations and the manner in which this information is communicated; and
- The influence that vaccination communication has on parents' and informal caregivers' decisions regarding childhood vaccination

Stage 2: Searching for the evidence



Decisions need to be made about:

- Databases
- Methods filters
- “Sibling” versus “non-sibling” studies
- Language
- Date of publication

Where did the authors search?



Cochrane Database of Systematic Reviews

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Electronic searches

We searched the following electronic databases for eligible studies from database inception to 30 August 2016.

- MEDLINE (OvidSP).
- MEDLINE In-process and Other Non-Index Citations (Ovid SP).
- Embase (Ovid).
- CINAHL (EbscoHOST).
- Anthropology Plus (EbscoHost).

Using guidelines developed by the Cochrane Qualitative Research Methods Group for searching for qualitative evidence (Noyes 2011), as well as modified versions of the search developed for the three COMMVAC intervention reviews (Kaufman 2013; Saeterdal 2014; Oyo-Ita 2016), we developed search strategies for each database. We chose these databases as we anticipated that they would provide the highest yield of results based on preliminary, exploratory searches. There was no date or geographic restrictions for the search.

Searching other resources

We searched the reference lists of all the included studies and key references (i.e. relevant systematic reviews). We searched for any studies using qualitative methods and analysis linked to the three COMMVAC intervention reviews.

Stage 2: Searching for the evidence - Sampling



- Effect reviews: Important to identify and include all studies
- Qualitative research: Too much data can threaten the quality of the analysis
- Sampling – map all relevant studies and then select - still not clear which approach is best – but sampling framework must address the review objective

How did the authors sample?



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Ames HMR, Glenton C, Lewin S.
Parents' and informal caregivers' views and experiences of communication about routine childhood vaccination: a synthesis of qualitative evidence.
Cochrane Database of Systematic Reviews 2017, Issue 2. Art. No.: CD011197.
DOI: 10.1002/14651958.CD011197.pub1

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purposive sampling to select from the eligible studies. We used a type of purposive sampling approach called maximum variation sampling with the aim of achieving the broadest possible variation within the included studies (Suri 2011). We decided on three key sampling criteria that would enable us to capture rich data from all settings that would best answer our review objectives. These became our three-step sampling frame. First, we sampled all studies from low- and middle-income country (LMIC) settings, as most studies took place in high-income country (HIC) settings. Second, we created a simple 1 to 5 scale for assessing the richness of data, with 1 corresponding to very few or thin qualitative data (for example, from an open-ended survey question); 3 being an average qualitative article in a peer-reviewed health services journal; and 5 being very rich data (for example, from an ethnographic study). We sampled all articles that scored a 3 or higher for data richness. Finally, we examined the remaining studies after applying the first two elements and sampled studies that most closely matched our review objectives. After applying our sampling frame, we selected 38 studies for data extraction. The findings from these studies are the basis for the review findings reported here. For a list of included but not sampled studies see Table 2.

Stage 3: Critically appraising the evidence



- No consensus (e.g. RoB tool for trials)
- CAMELOT project
- Critical Appraisal Skills Programme (CASP) tool
- Minimum quality requirement: Must have qualitative data collection AND qualitative data analysis

How did the authors critically appraise the evidence?



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Appraisal of the methodological limitations of included studies

Our inclusion criteria specified that studies had to have used qualitative methods for both data collection and data analysis. This criterion constitutes a basic quality threshold. We discarded studies that did not meet this standard. To assess the methodological limitations (or quality) of included studies, we used an adaptation of the Critical Appraisal Skills Programme (CASP) assessment tool for qualitative studies ([Atkins 2008](#)). Other reviews of qualitative evidence have also used this tool ([Carlsen 2007](#); [Munro 2007](#); [Glenton 2013](#)). The adapted tool includes the following eight questions.

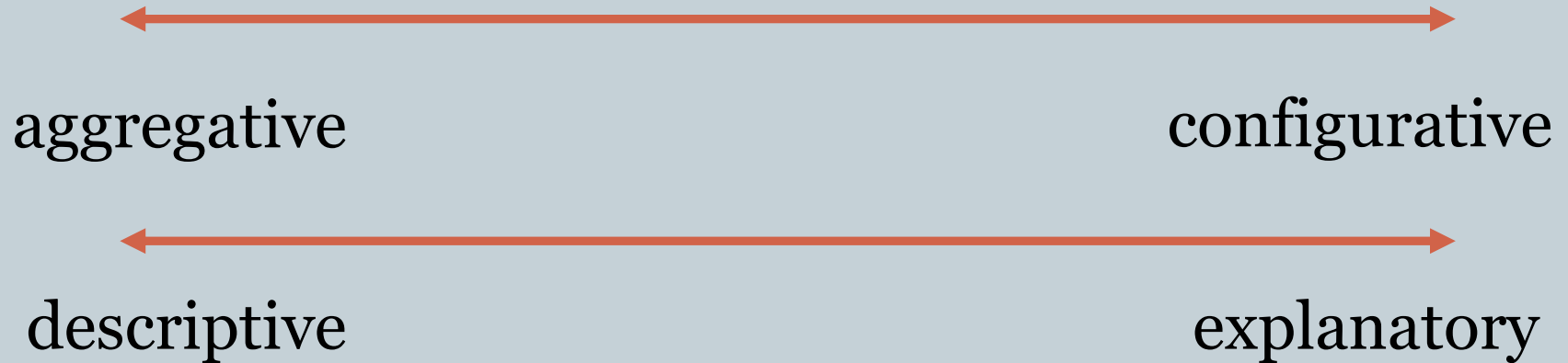
1. Are the setting(s) and context described adequately?
2. Is the sampling strategy described, and is this appropriate?
3. Is the data collection strategy described and justified?
4. Is the data analysis described, and is this appropriate?
5. Are the claims made/findings supported by sufficient evidence?
6. Is there evidence of reflexivity?
7. Does the study demonstrate sensitivity to ethical concerns?
8. Any other concerns?

Stage 4: Synthesising the evidence

- many different names and approaches



Different approaches *transform the data* to different extent. They are more or less....



Approaches that are primarily aggregative*.....



- Here, review authors “add up” the data from primary studies to answer a review question

(Thanks to Karin Hannes, Leuven University, for slide concept)

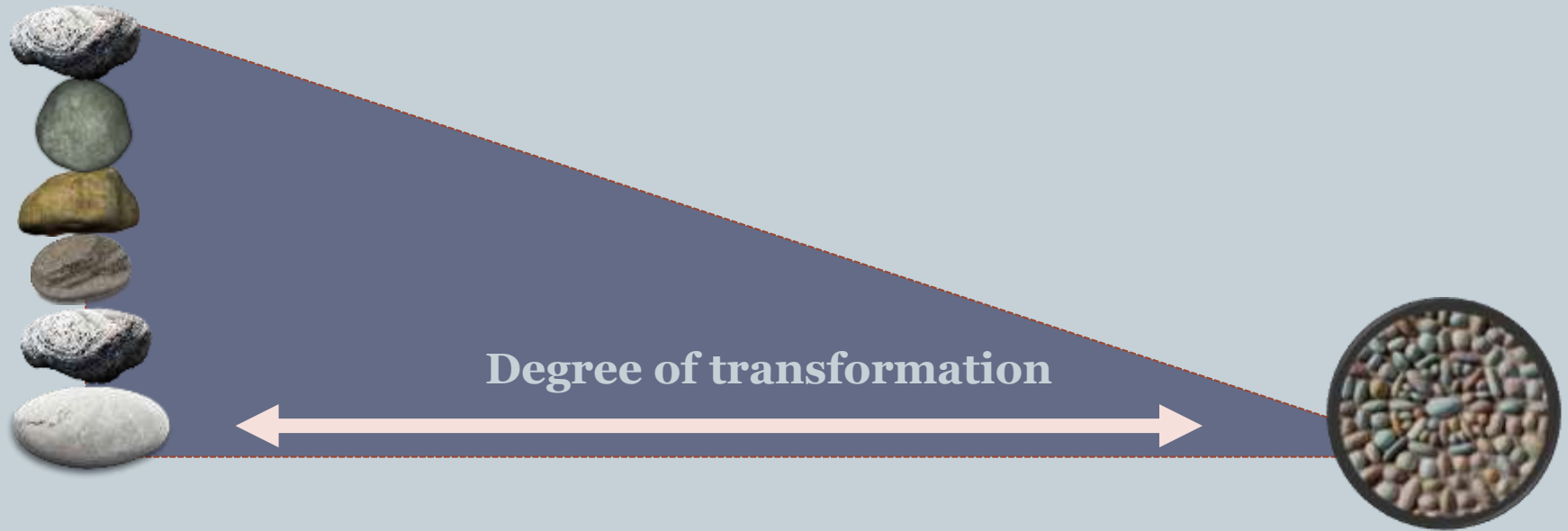
and approaches that are primarily configurative*



- Here, review authors arrange the data from primary studies to answer the review question

(Thanks to Karin Hannes, Leuven University, for slide concept)

Different degrees of transformation



Varying degrees of transformation: Example



- How do children in institutions experience staffing arrangements? What are their attitudes to long and short shifts?



Varying degrees of transformation: Example



Aggregative / Descriptive:

Most children preferred staff to have week-long shifts because they liked the stability and structure and the opportunity to form attachment. Children in one study preferred short shifts, but these children had poor relationships with their caregivers. In one study the experiences of the children were unclear.



Configurative / Explanatory:

In situations where children have good relations with their caregivers, they prefer longer shifts because these provide stability and structure and opportunities to form attachment.



Different approaches are also more or less....



deductive

inductive

Approaches that are primarily deductive...



- Review authors already have a theory or framework that they use to organise their data (testing this theory in the process)



...and approaches that are primarily inductive



- Review authors build a theory or framework using the data they have

Stage 4: Synthesising the evidence



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We applied a five-step process for data extraction and synthesis. Firstly, one author (HA) chose the article judged to most closely answer the review objectives. Secondly, we coded this article using a thematic analysis approach. Thirdly, we created a data extraction sheet based on the codes that emerged from step two. Fourthly, we coded the next article using the data extraction sheet. If necessary, we made additions to the data extraction sheet if new themes emerged from the subsequent articles. Finally, we continued this process until we had extracted data from all of the sampled articles. Two other authors verified data extraction and added any other data that they felt should have been included.

We synthesised the data from the themes identified during the constant comparison thematic data extraction and identified the review findings. Afterward, we re-read the included studies to double check that we had extracted all data relevant to the findings. Once data coding and analysis were complete, we looked for differences in views and perceptions within and across settings (including low-, middle- and high-income countries as well as rural and urban areas), groups (for instance minority groups; first-time parents; older and younger parents; informal caregivers) and different vaccines. We also attempted to explore whether the setting or source of communication had an impact on people's perceptions of that communication and its influence on their decision regarding vaccination.

Exercise



- You have been provided with data from different studies that the review authors have extracted. The authors have decided that this data belongs in the same category
- Read through the data
- How would you synthesise this data? Try and create a finding

Data extracts



Parents suggested that designated times for discussions about immunisation with health professionals should be education or postnatal support. They also wanted to receive information before their scheduled immunisation appointment and suggested this could be sent out with the immunisation appointment card. This would enable further discussion and reflection before their decision was reached. *"I might not have had the MMR vaccination, I was given the fact sheet after my son had had it, which I was a bit cross about."* (UK, 2001)

"Focus groups in Kazakhstan expressed that there was not enough information to help parents make a good decision about vaccinating a child, and that this lack of information reinforced their concerns. *"We would like to have information before vaccination. There is not enough information . . . therefore there occur doubts [regarding vaccination]."* (Astana, Kazakhstan Focus Group Participant)" (Kazakhstan 2008)

"Mothers noted that they had not received information about the preschool vaccines and that did not remember what they had received about their infants' vaccinations." (UK, 2010)

"Parents emphasized that the majority of the time they did not receive this information until the actual immunization visit, when they did not have time to focus on the materials. They suggested that the material be given out multiple times before their child was due for a vaccination. Mothers wanted information before their child's immunization visit so that they could ask their HCPs "educated questions" and have a more useful discussion about any concerns they might have about immunizations:.,

"When [your child is] called in and getting ready to get the shots you're flustered with worrying about how to comfort the child...you're not thinking about trying to read that information at the time. You need it ahead of time "" (USA 2005)

Stage 5: Assess confidence in the evidence



- **GRADE-CERQual: Assessing confidence in evidence from reviews of qualitative evidence**

GRADE CERQual

Stage 5: Assess confidence in the evidence



Synthesis finding:

“Parents liked to receive vaccination information in good time before each appointment, including all follow-up appointments, in order to reflect on the content and prepare questions.”

Moderate confidence due to:

- **moderate concerns** regarding methodological limitations due to poor reporting from some studies on context, sampling and data collection
- **no or very minor concerns** regarding coherence
- **minor concerns** regarding relevance due to partial due to a limited geographic spread and focus on MMR
- **minor concerns** regarding adequacy due to the thinness of the data



Further reading



- GRADE-CERQual series of 7 papers:
<https://implementationscience.biomedcentral.com/articles/10.1186/s13012-017-0688-3>
- Glenton C, Lewin S (2014): Using evidence from qualitative research to develop WHO guidelines. Chapter 15 of the WHO Handbook for Guideline Development.
http://www.who.int/publications/guidelines/Chp15_May2016.pdf
- Noyes J, Hannes K, Booth A et al. Qualitative and Implementation Evidence and Cochrane Reviews. Chapter 20 of the Cochrane Handbook (2013)
http://methods.cochrane.org/sites/methods.cochrane.org.qi/files/public/uploads/Handbook52_QQ_Qualitative_web%20update%20Oct%202015.pdf +
supplemental guidance: <http://methods.cochrane.org/qi/supplemental-handbook-guidance>
- **Reporting the effects of an intervention in EPOC reviews**
https://epoc.cochrane.org/sites/epoc.cochrane.org/files/public/uploads/Resources-for-authors2017/how_to_report_the_effects_of_an_intervention.pdf