Qualitative Research Methods

Stephanie Bonne, MD FACS

October 20, 2018


ONE DOES NOT SIMPLY
DO QUALITATIVE RESEARCH BECAUSE YOU THINK
IT WILL BE EASIER THAN A STATS BASED PROJECT

What is Qualitative Data?

	Qualitative	Quantitative
Conceptual	Concerned with understanding human behaviour from the informant's perspective	Concerned with discovering facts about social phenomena
	Assumes a dynamic and negotiated reality	Assumes a fixed and measurable reality
Methodological	Data are collected through participant observation and interviews	Data are collected through measuring things
	Data are analysed by themes from descriptions by informants	Data are analysed through numerical comparisons and statistical inferences
	Data are reported in the language of the informant	Data are reported through statistical analyses

Source: Adapted from Minchiello *et al.* (1990, p. 5)

Differences in Project Design

	Qualitative	Quantitative
Purpose	To describe a situation, experience or gain insight into a practice pattern	To measure the magnitude – how widespread is a disease or practice
Format	No predetermined response	Predetermined response with standard measures
Data	In depth explanatory data from small samples	Wide data from statistically large and representative sample
Analysis	Draw out patterns from concepts and insights	Tests hypotheses
Result	Illustrative explanations and individual responses	Numerical aggregation and summaries
Sampling	Theoretical	Statistical

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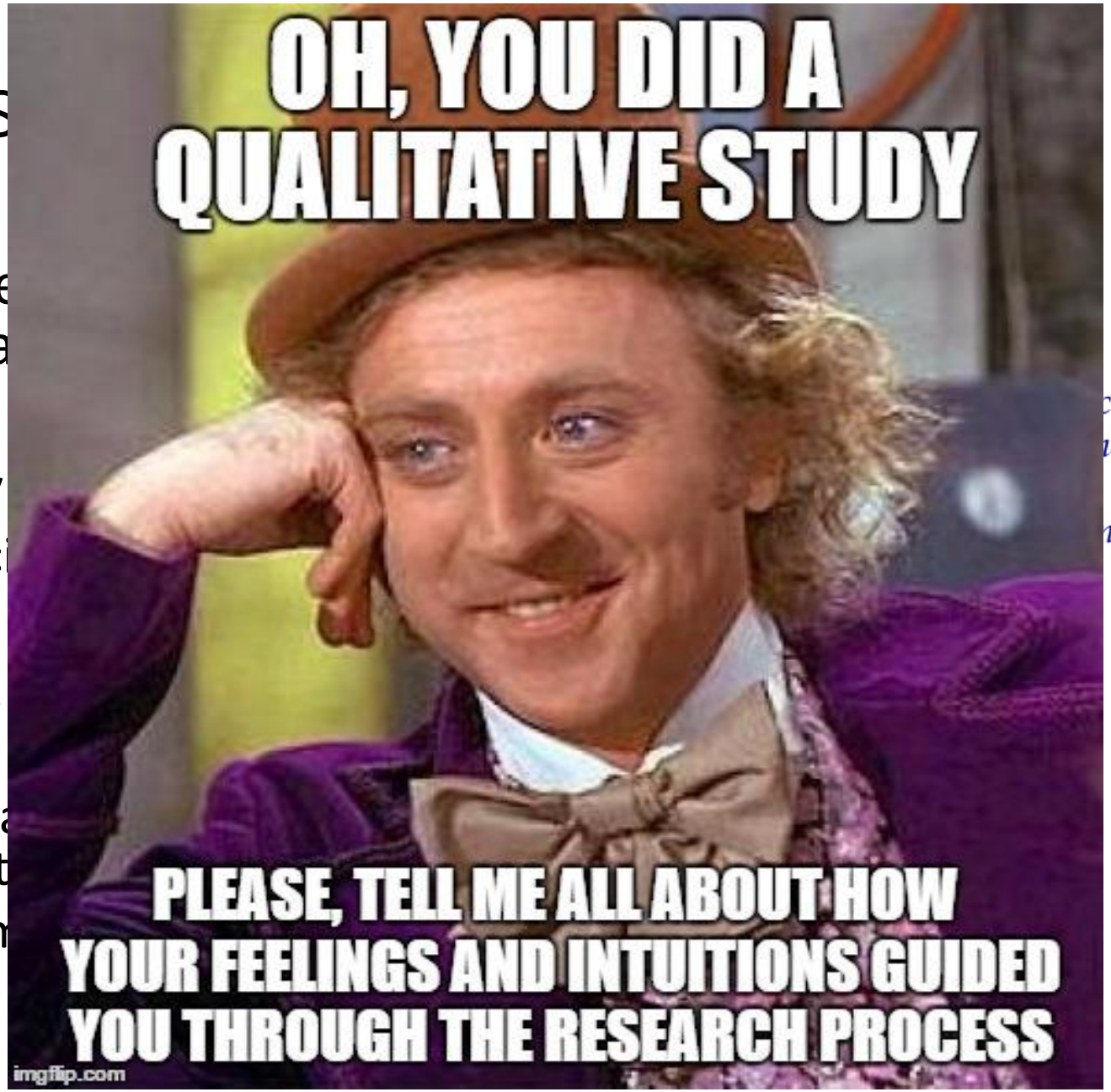

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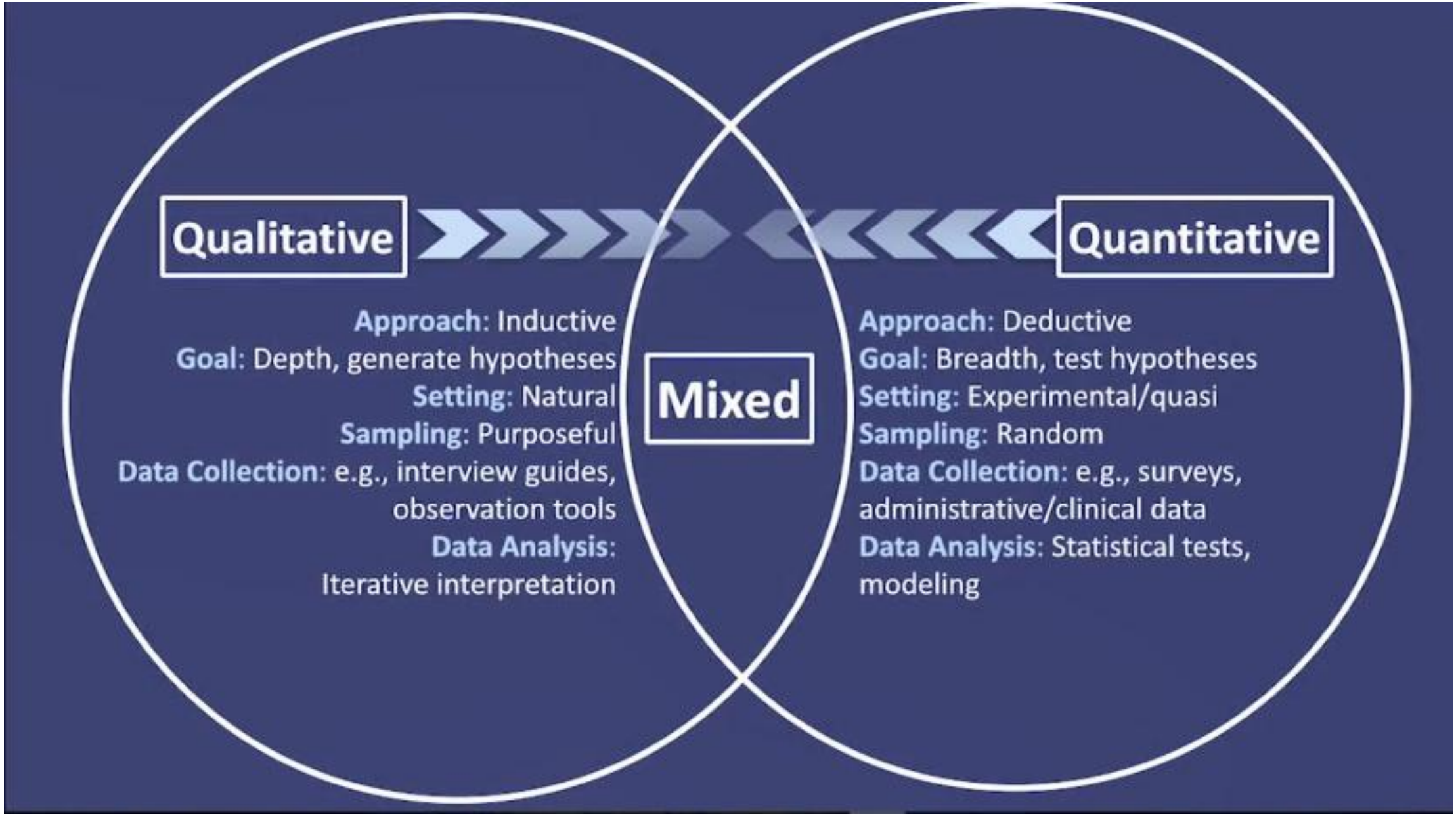
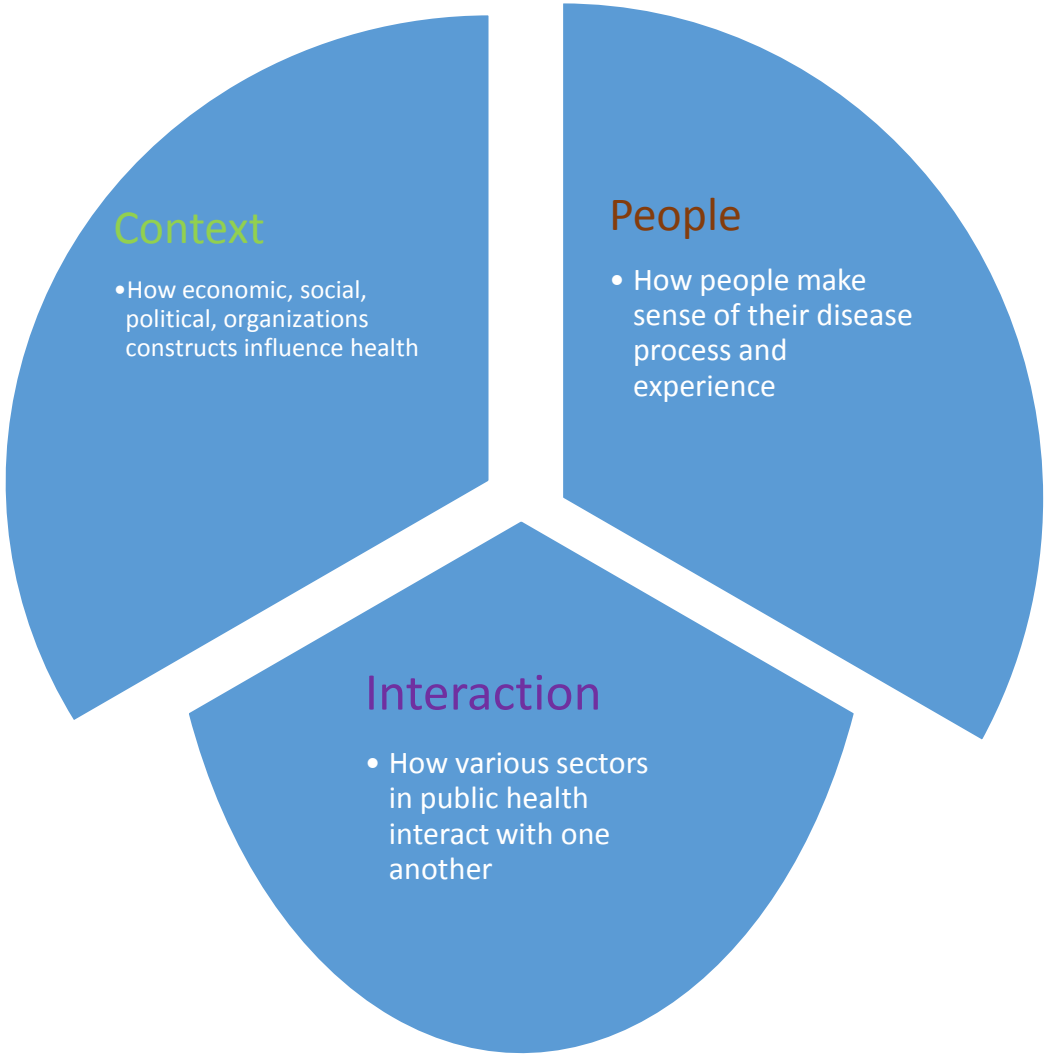
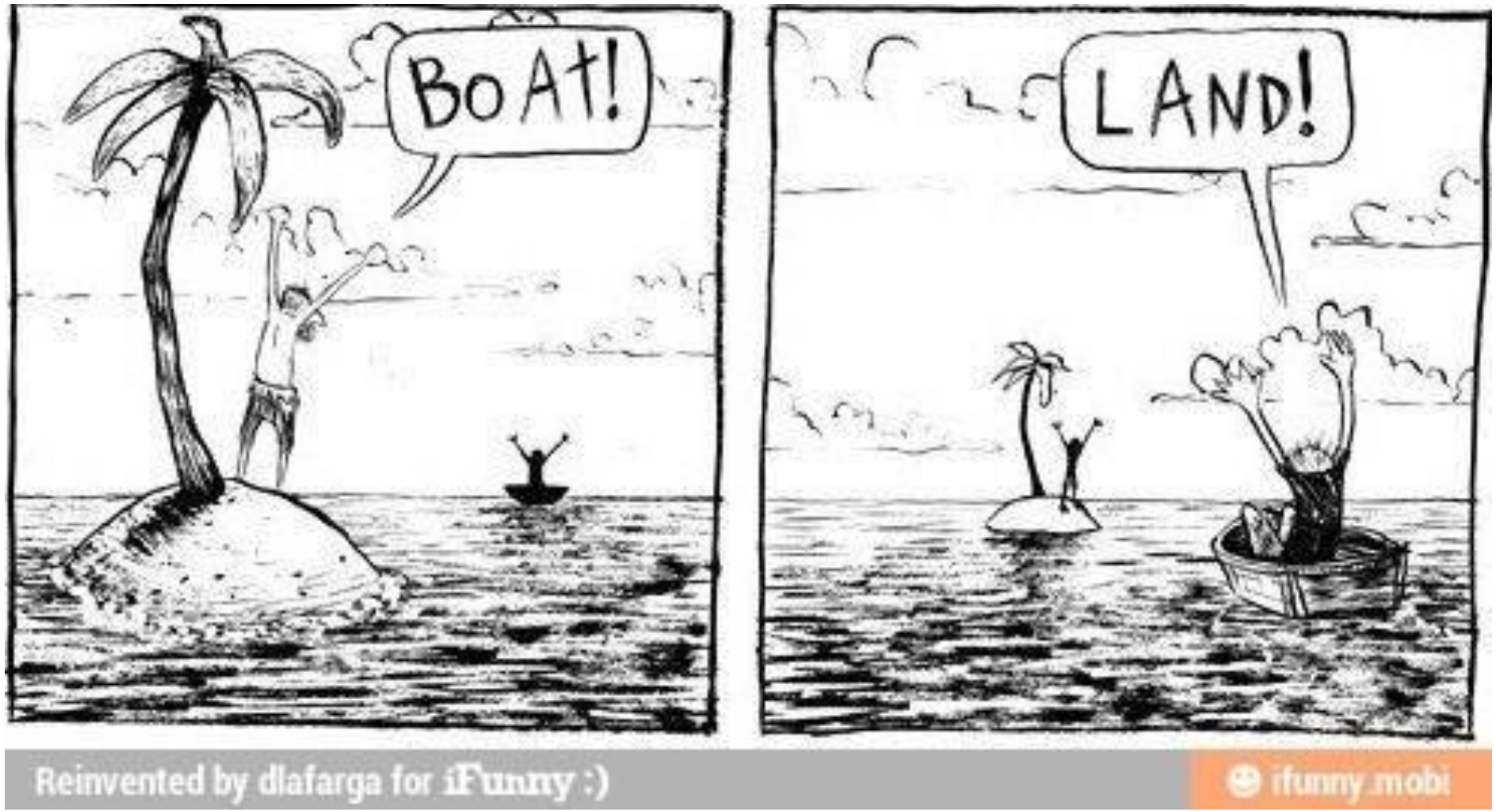
Pope & Mays
BMJ 1995;311:42-45


Qualitative
Quantitative
Approach: Inductive
Goal: Depth, generate hypotheses
Setting: Natural
Sampling: Purposeful
Data Collection: e.g., interview guides, observation tools
Data Analysis: Iterative interpretation
Mixed
Approach: Deductive
Goal: Breadth, test hypotheses
Setting: Experimental/quasi
Sampling: Random
Data Collection: e.g., surveys, administrative/clinical data
Data Analysis: Statistical tests, modeling

What Does Qualitative Data Tell us?

- Answers Questions like:
  - What?
  - How?
  - Why?
  - What does it mean?
- Generates Deeper understanding of issue or topic
- Helps us understand barriers to care and systems
- Can generate new theories or hypotheses




BOAT!
LAND!
Reinvented by dlafarga for iFunny :)
ifunny.mobi

Surg Endosc (2004) 18: 372–378
DOI: 10.1007/s00464-003-9047-3

Qualitative and quantitative analysis of the learning curv simulated surgical task on the da Vinci system

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Received: 18 February 2003/Accepted: 2 October 2003/O

Abstract

Background: Robotic telemanipulation systen solutions to the problems of less dexterity a constraints of minimally invasive surgery (M ever, their influence over surgeons' dexterity a ing curve needs to be assessed. We preser analysis as an objective method to measure pe and learning progress.

Methods: Thirteen surgeons completed five small bowel anastomoses using the da Vin Objective Structured Assessment of Techni (OSATS) allowed qualitative analysis. Qu analysis used API software of the system to ret time robotic signal data of time, path le number of movements. Wilcoxon signed rank used for statistical analysis. A p value < 0.05 sidered significant.

Results: OSATS global scores were 18.6 poir first attempt and 26 for the fifth attempt (α Cronbach's alpha = 0.894). Paired data c analysis for attempts 1 vs 5 showed significa time taken 3507 sec and 2287 sec ($p < 0.0$ number of movements 2411 and 1387 ($p = 0$ path length 21,630 cm and 13,941 cm ($p = 0$

Conclusions: A rapid learning curve to a comp using the da Vinci system is possible aided b tem's intuitive motion. Motion analysis is a u to measure performance in the da Vinci sys pared to OSATS and time alone.

Key words: Minimally invasive surgery — sessment — Telemanipulator systems

Since the widespread introduction of minim sive surgery (MIS) in the early 1990s, init

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IJMOR

Original Article

COMPARISON OF EFFICACY OF 2% LIDOCAINE AND 0.75% ROPIVACAINE ACTIVITY IN ACHIEVING QUALITATIVE AND QUANTITATIVE ANALGESIA DURING SURGICAL REMOVAL OF IMPACTED MANDIBULAR THIRD MOLARS

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ABSTRACT

Background: Ropivacaine has been successfully used in surgery, gynaecology and obstetrics, but is not currently available for dentists. Reports support the use of Ropivacaine as a long acting local anaesthetic in oral and maxillofacial surgical procedures requiring surgical anaesthesia and post-operative analgesia.
Aim: The aim of the study was to compare the anaesthetic efficacy of 0.75% Ropivacaine with that of 2% Lidocaine Hydrochloride during the surgical removal of impacted mandibular third molars.
Material and Methods: A prospective randomized double-blind clinical trial was conducted on 28 subjects who required surgical extracted of one or both of their impacted mandibular third molars. A single operator performed the extractions following injection of either 0.75% Ropivacaine or 2% Lidocaine Hydrochloride + 1: 80,000 conc. adrenaline, randomly in a double-blind manner. Pain during the surgery was assessed using a Visual Analog Scale. Other parameters that were considered, included the time of onset of anaesthesia, duration of anaesthesia and the need for re-anaesthesia during the procedure.
Results: The results showed that differences in time of onset for 0.75% Ropivacaine (92.27 ± 34.85 secs) and 2% lidocaine (79.14 ± 11.065 secs), duration of action for 0.75% Ropivacaine (5.03 ± 0.41 hrs) and 2% Lidocaine (3.27 ± 056 hrs) and intraoperative pain for 0.75% Ropivacaine (1.27) and 2% Lidocaine (0.00) were statistically significant. Also, 2% of subjects required a re-anaesthesia using 0.75% Ropivacaine whereas none of the subjects which were given 2% Lidocaine, required re-anaesthesia.
Conclusion: The study concludes that the clinical effects of 2% Lidocaine with 1: 80,000 conc. Adrenaline in terms of latency, intraoperative pain control and depth of anaesthesia are superior to 0.75% Ropivacaine, though the latter gives a prolonged duration of anaesthesia.

KEYWORDS:

Lidocaine , Ropivacaine, Impacted Molars

INTRODUCTION

Pain is defined as an unpleasant emotional or sensory experience associated with actual or potential tissue damage or described in terms of

International Journal of Medical and Oral Research July-December 2017; 2(2):1-5 1

Obesity Surgery, 15, 266-272

Exploring the Impact of Obesity Surgery on Patients' Health Status: a Quantitative and Qualitative Study

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Background: Obesity surgery has been result not only in sustained weight loss, improvements in psychological morbidity of life. The present study aimed to explore

How Surgeons Conceptualize Talent: A Qualitative Study Using Sport Science as a Lens

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OBJECTIVES: Debates prevail regarding the definition of surgical talent, and how individuals with the potential to become talented surgeons can be identified and developed. However, over the past 30 years, talent has been studied extensively in other domains. The objectives of this study is to explore notions of talent in surgery and sport in order to investigate if the field of surgical education can benefit from expanding its view on talented performances. Therefore, this study aims to use the sport literature as a lens when exploring how surgeons conceptualize and define talent.

DESIGN: Semi-structured interviews were conducted with a sample of 11 consultant surgeons from multiple specialties. We used constructivist grounded theory principles to explore talent in surgery. Ongoing data analysis refined the theoretical framework and iteratively informed data collection. Themes were identified iteratively using constant comparison.

SETTING: The setting included 8 separate hospitals across Canada and Denmark.

PARTICIPANTS: A total of 11 consultant surgeons from 6 different surgical subspecialties (urology, orthopedic surgery, colorectal surgery, general surgery, vascular surgery, head & neck surgery) were included.

RESULTS: We identified three key elements for conceptualizing surgical talent: (1) Individual skills makes the surgical prospect "good", (2) a mixture of skills gives the surgical prospect the potential to become talented, and (3) becoming talented may rely on the fit between person and environment.

CONCLUSION: We er understanding talent in s struct to agree on. Whetl about talent will continue differently. While we he ideas summarize our pa surgical talent. These fir ecological approach from the limits of a reductior individual-environment s for describing talented p

KEY WORDS: surgical e munication skills, techni tency-based education

COMPETENCIES: Practi ment, Medical Knowledg tion Skills

INTRODUCTION

Talent has been tacitly selection of surgical train education is shifting towa The importance of evalu the competency-based ec ensure trainees progress th in a way that fit to their little has been published talent and its dimensio surgical talent is, and he to become talented surge oped but much of what over the past 30 years,

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BMC Women's Health

BioMed Central

Research article

Open Access

Satisfaction and quality of life in women who undergo breast surgery: A qualitative study

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ELSEVIER

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SURGERY FOR OBESITY AND RELATED DISEASES

Surgery for Obesity and Related Diseases 12 (2016) 1086–1090

Integrated health original article

Tipping point: factors influencing a patient's decision to proceed with bariatric surgery

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Abstract

Background: Despite the fact that bariatric surgery is the most effective intervention for morbid obesity, only a fraction of obese patients, even after undergoing evaluation for surgery, decide to undergo the surgery. Opting out by patients is fairly common yet little is known about factors that lead a patient to decide to undergo surgery.
Objective: The purpose of this qualitative study was to identify factors that "tipped the scales" in the patient's experience leading to a decision to move ahead with surgery.
Setting: The study was carried out in the bariatric surgical clinic of a southeastern regional medical center.
Methods: This qualitative descriptive study utilized semistructured interviews with patients (n = 24) at the time of their "decision visit" to determine the factors related to their positive decision to move forward. A modification of Colaizzi's procedural steps of analysis was used to extract, organize, and analyze data for central themes.
Results: Two main factors leading participants to decide to move ahead with bariatric surgery were their own worsening health issues and low energy levels that limited their activities. Participants also noted additional factors that impacted their "tipping point" such as financial considerations and family influences.
Conclusions: The decision to move ahead with bariatric surgery is influenced by many factors to which this research provides additional insight. Further research is warranted to fully understand this phenomenon and develop appropriate outreach and educational approaches. (Surg Obes Relat Dis 2016;12:1086–1090.) © 2016 American Society for Metabolic and Bariatric Surgery. All rights reserved.

Keywords: Obesity; Bariatric surgery; Decision-making; Qualitative research

Bariatric surgery is now recognized as the most effective treatment for morbid obesity and has been shown to bring about not only sustained weight loss [1–3] but also amelioration or lessening of co-morbidities [1,2,4–6] The high prevalence of morbid obesity in the United States [7] suggests that a large number of patients might benefit from weight loss surgery, yet data indicate that only a fraction of obese patients who could benefit actually choose to undergo the surgery. Rates of bariatric surgery have plateaued in the US with only 1% of clinically-eligible patients opting for surgical intervention [8].

Anecdotal accounts suggest that patients who have been evaluated as good candidates for surgery frequently either delay or opt out of surgery completely. The reasons are not fully understood. Schauer et al. [9] in a recent study noted that of 200 patients enrolled in a bariatric surgery interest group only 33 had undergone surgery over a 12-month period and another 30 were planning to have surgery,

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Qualitative Approach:

Deductive Approach

- Framework is predetermined by the researcher
- Research questions
- Quicker and easier
- You have an idea of the likely responses

Inductive Approach

- No structure or framework
- Used when researcher knows very little about the research phenomenon

Reasoning in Qualitative Analysis

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Inductive

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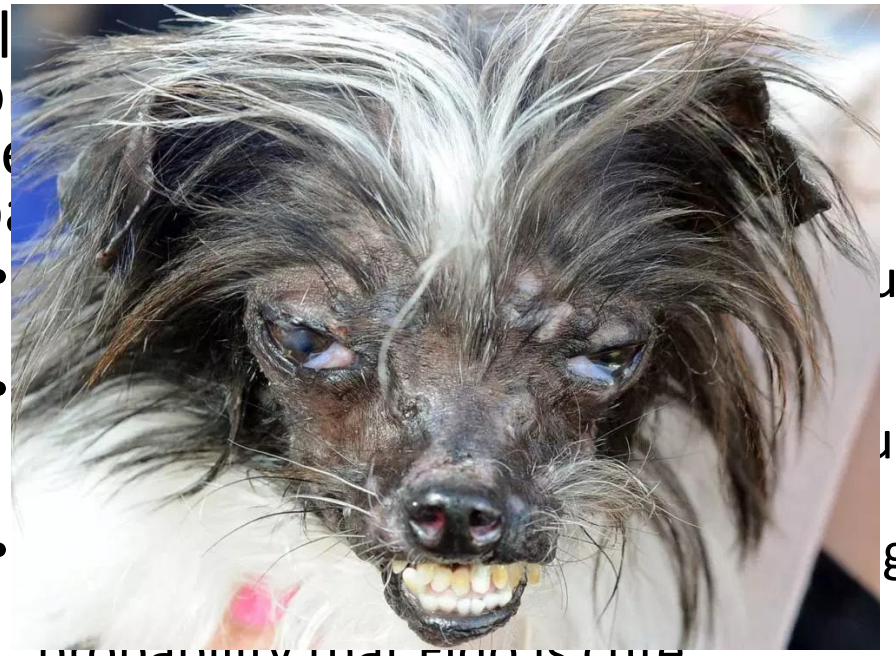
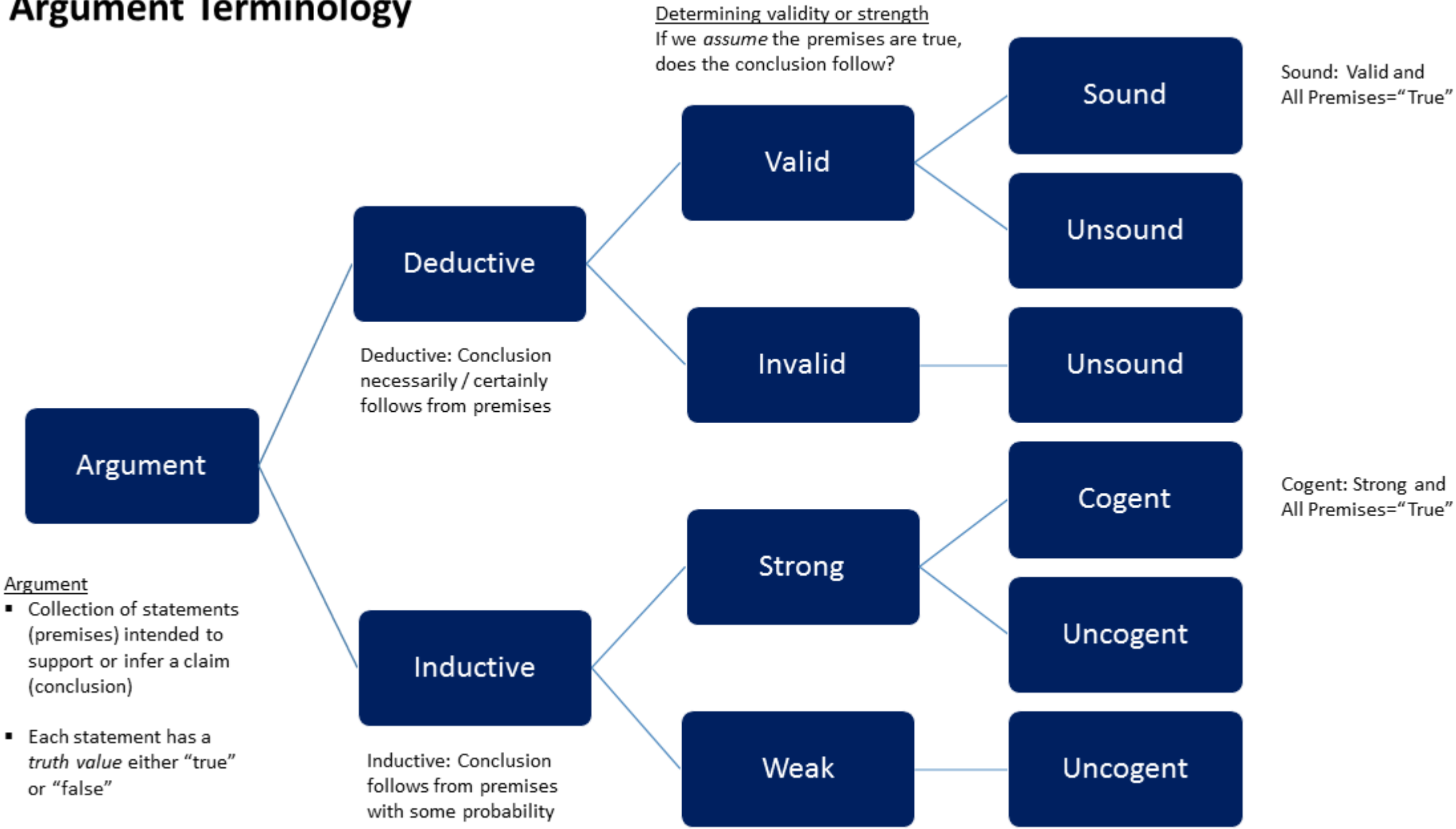


probability that Fido is cute.

Argument Terminology



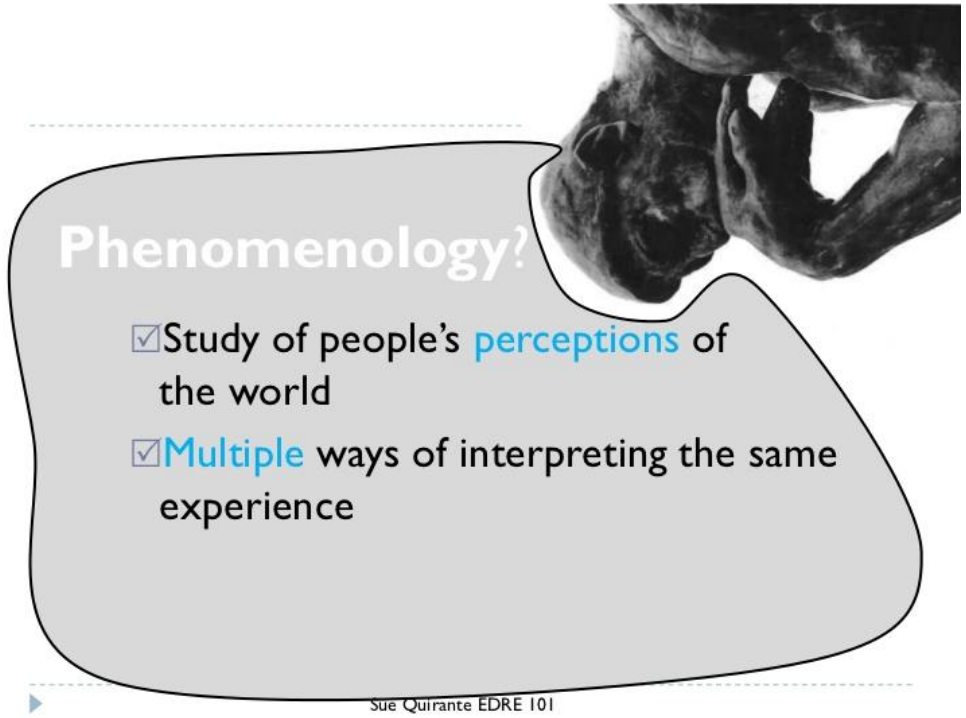
Argument

- Collection of statements (premises) intended to support or infer a claim (conclusion)
- Each statement has a *truth value* either "true" or "false"

Source Information: Patrick J. Hurley "A Concise Introduction to Logic

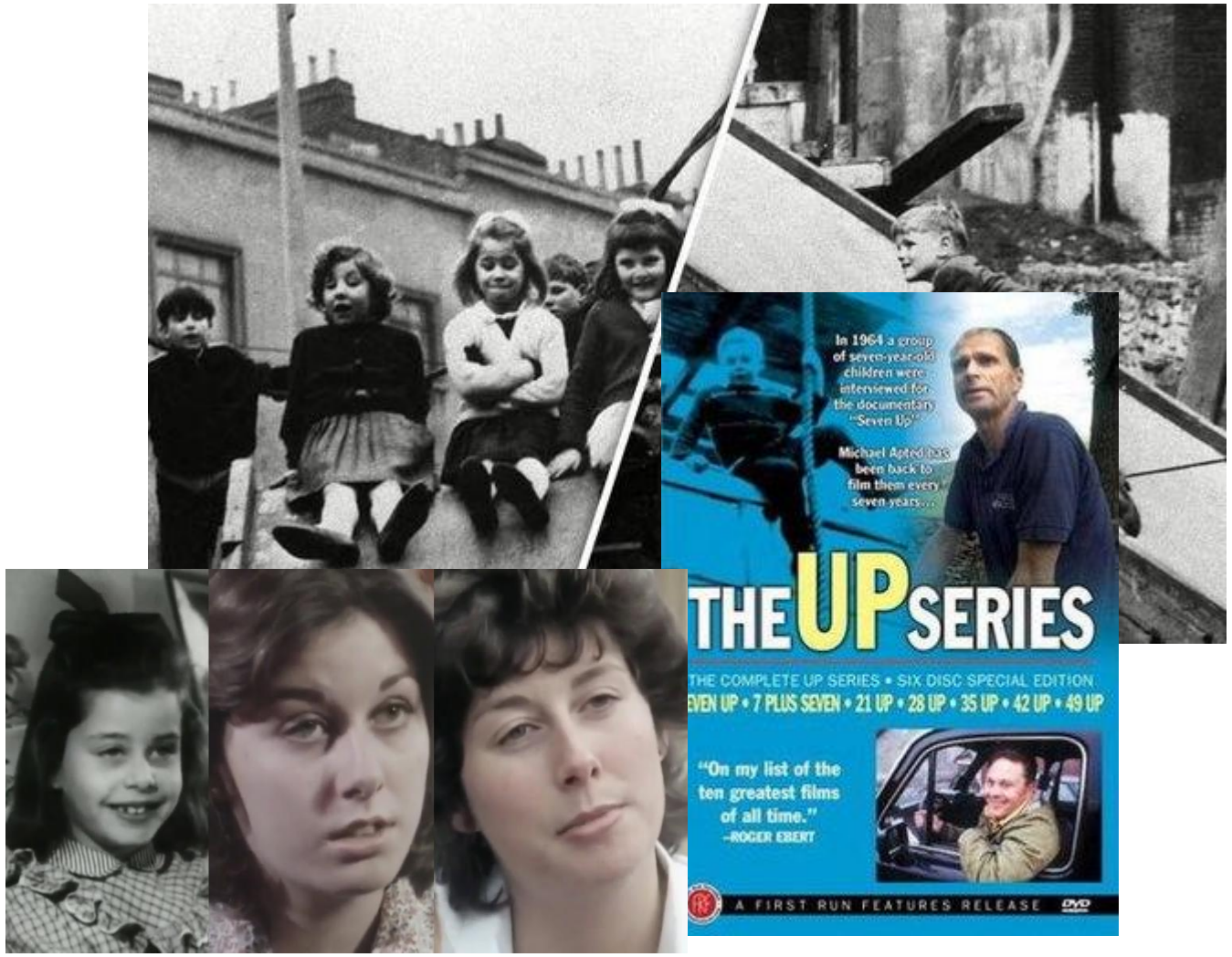
Qualitative Study Design

- Ethnographic
  - Study of a story or culture of a people
  - Intended to generate cultural awareness or sensitivity
  - Example: Studying how violence impacts a community in order to generate trauma informed care principles
- Phenemenological
  - Individual lived experiences with a disease process
  - Example: Global Experience of being a breast cancer patient
- Grounded theory
  - Developing a new theory about a phenomenon and then grounding it in data
  - Example: Effectiveness of marketing on encouraging colon cancer screening



Qualitative Study Design

- Participatory Action Research
  - Individuals and groups researching their own experiences
  - Example: A group of surgery residents discussing and coding their own experiences in residency
- Case Study
  - In depth analysis of a small number of individuals over a period of time
  - Example: 7 up series



Sampling techniques in qualitative research

Snow ball/chain sampling

Extreme/deviant case sampling

Homogeneous sampling

Maximum variation sampling

Convenience sampling

Opportunistic sampling

Steps to Effective Qualitative Research

- Decide on a data collection method
  - Interviews
    - Structured
    - Semi structured
  - Observation
  - Focus Group Discussions
  - Biographical

Question Type	Example
Ideal	What would be the best way to encourage colon cancer screening?
Leading	Do you think that prevention is better than cure?
Multiple	Tell me the best thing about your hospital visit, the worst thing, and the memory that stands out the most?
Hypothetical	If you could tell your insurance company anything, what would it me?
Provocative	I have heard people say that the prep is worse than the colonoscopy – what do you think?

Steps to Effective Qualitative Research

- Transcribe all your data
  - Record your interviews
  - Transcribe word for word
  - Consider non-verbal expressions
  - Use CAQDAS (Computer Assisted Qualitative Analysis Software)
    - ATLAS, Nvivo, HypeRESEARCH, Max QDA, Ethnograph, Open Code
    - You can analyze by hand! Use Excel
- Organize your Data
  - Organize your data in a visually clear way
  - Use tables
  - Input your research objectives into a table and assign the data by objectives

Steps to Effective Qualitative Research

- Code your data
  - Organize into concepts, properties and patterns
  - Codes come from:
    - Data you have already collected
    - Theories
    - Relevant Research Findings (Literature Search)
    - Research objectives
  - Popular Coding Terms
    - Descriptive Coding: Summarizing the central theme of your data
    - In Vivo-Coding: Using the language of your respondents to code
    - Pattern Coding: Finding patterns in your data and using them for the basis of your coding

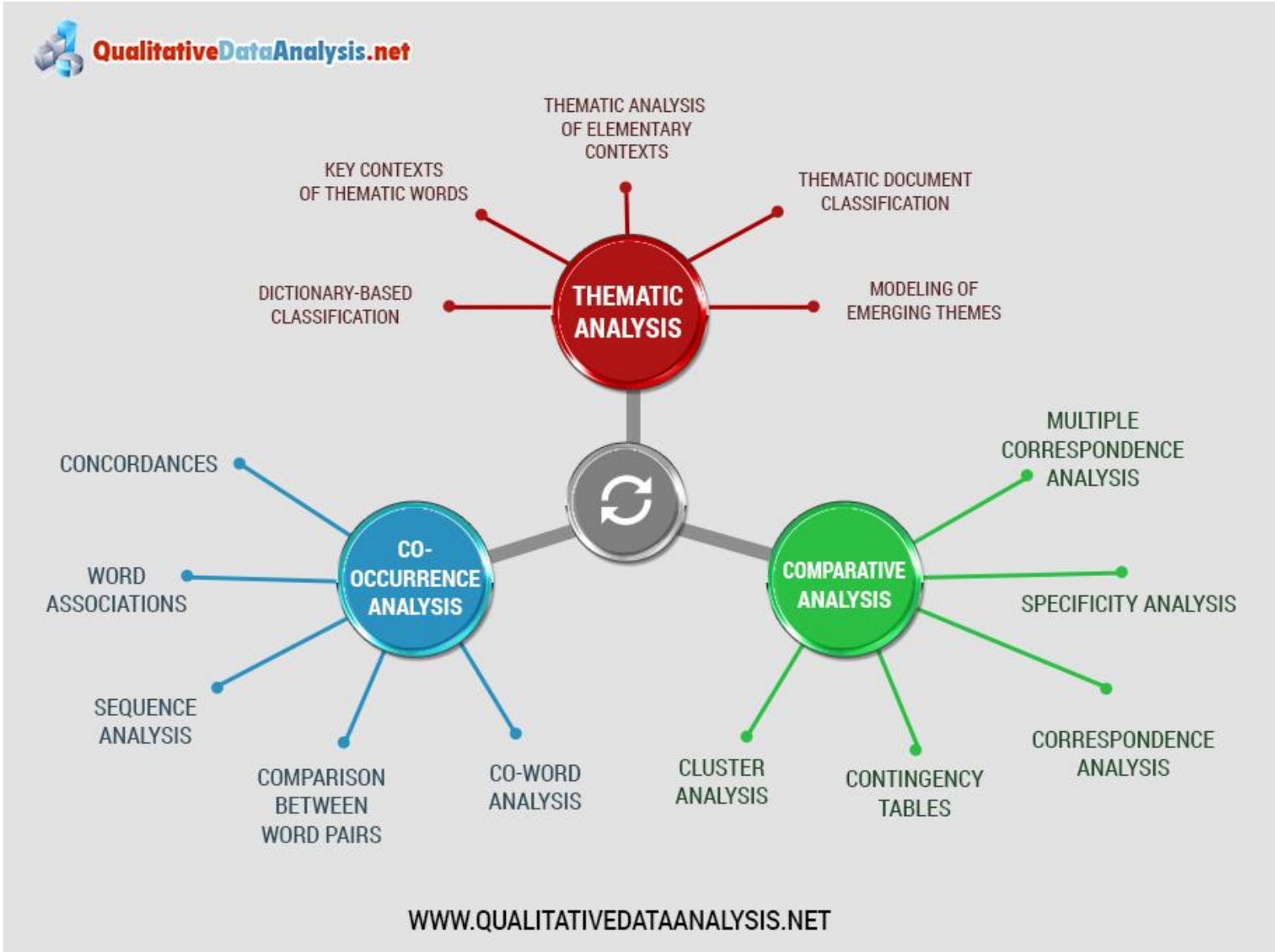
Steps to Effective Qualitative Research

- Validate the Data
  - Validity: Accuracy of your design and methods
  - Reliability: Extent to which your procedure produced consistent results

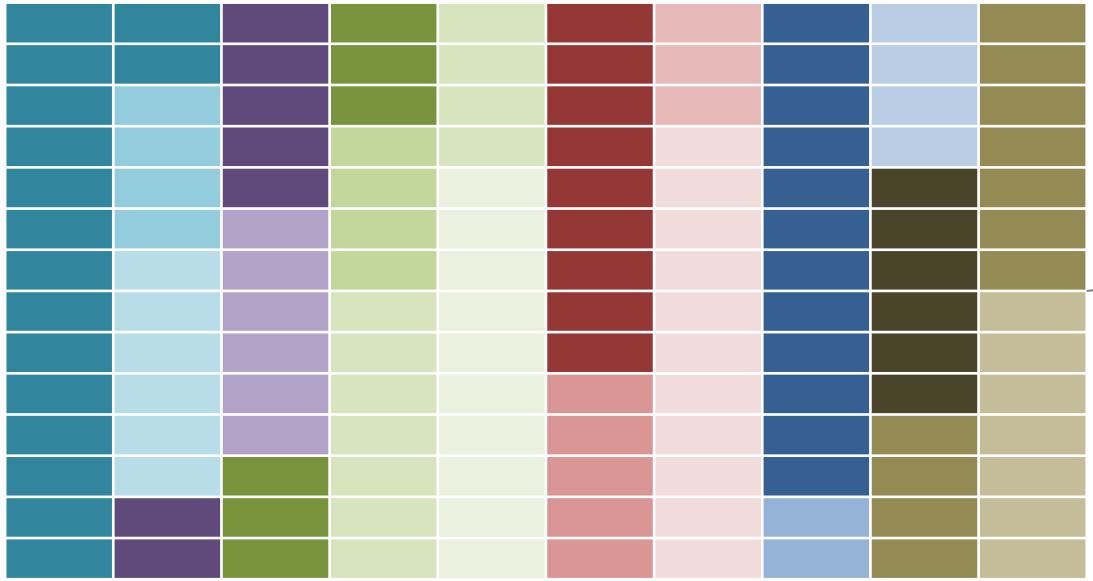
- Conclusion
  - Find a Valid link between the analyzed data and your research objectives

STOP HERE IF DOING EXPLORATORY RESEARCH

- Second Order Analysis
  - Identify Recurrent Themes
  - Notice Patterns in the data
  - Identify Respondent Clusters
  - Build a Sequence of Events
  - Develop a Hypothesis and Test (develop an intervention or screening tool)


QualitativeDataAnalysis.net
THEMATIC ANALYSIS OF ELEMENTARY CONTEXTS
KEY CONTEXTS OF THEMATIC WORDS
THEMATIC DOCUMENT CLASSIFICATION
DICTIONARY-BASED CLASSIFICATION
THEMATIC ANALYSIS
MODELING OF EMERGING THEMES
MULTIPLE CORRESPONDENCE ANALYSIS
CONCORDANCES
CO-OCCURRENCE ANALYSIS
COMPARATIVE ANALYSIS
WORD ASSOCIATIONS
SPECIFICITY ANALYSIS
SEQUENCE ANALYSIS
CORRESPONDENCE ANALYSIS
COMPARISON BETWEEN WORD PAIRS
CO-WORD ANALYSIS
CLUSTER ANALYSIS
CONTINGENCY TABLES
WWW.QUALITATIVEDATAANALYSIS.NET

Focus Groups & Interviews



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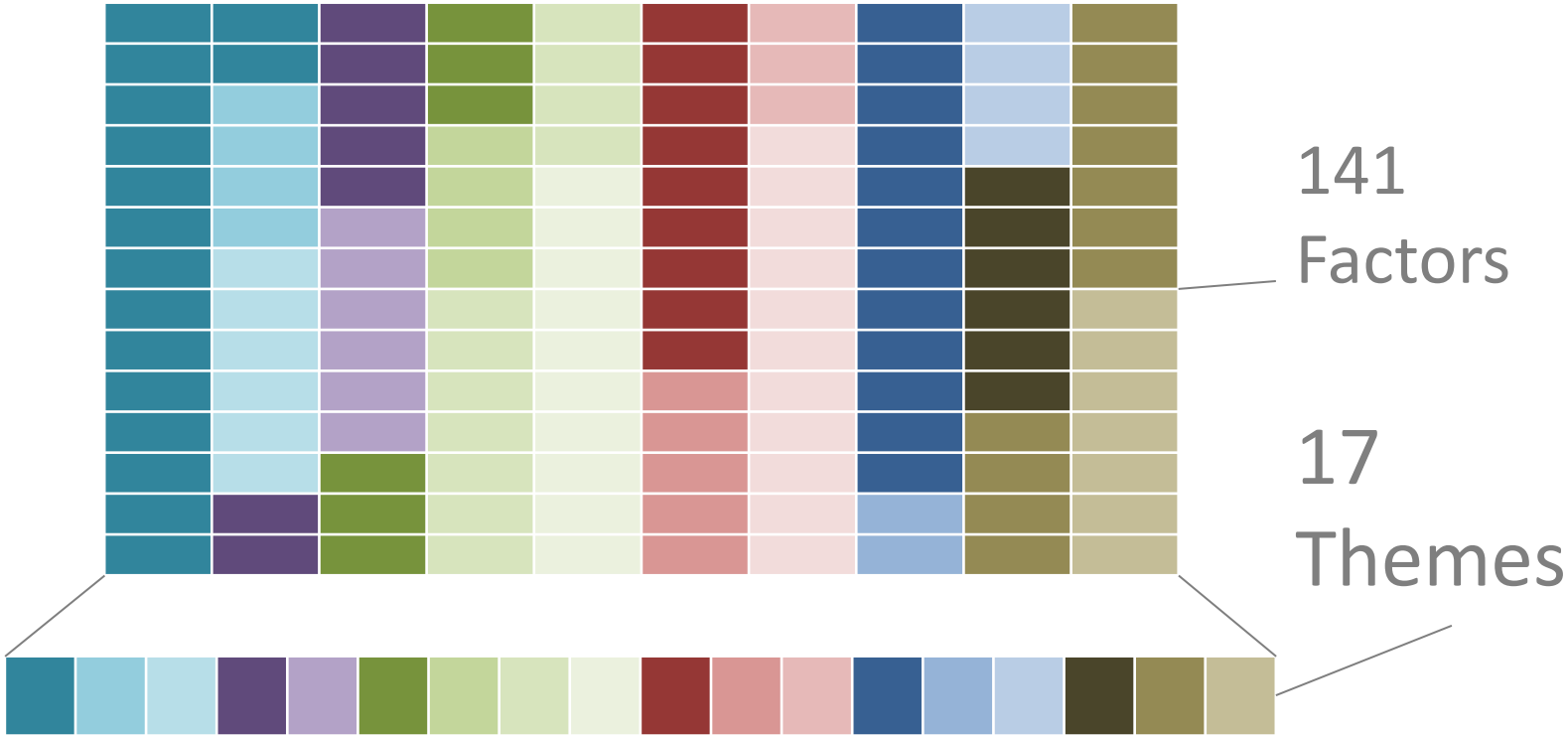
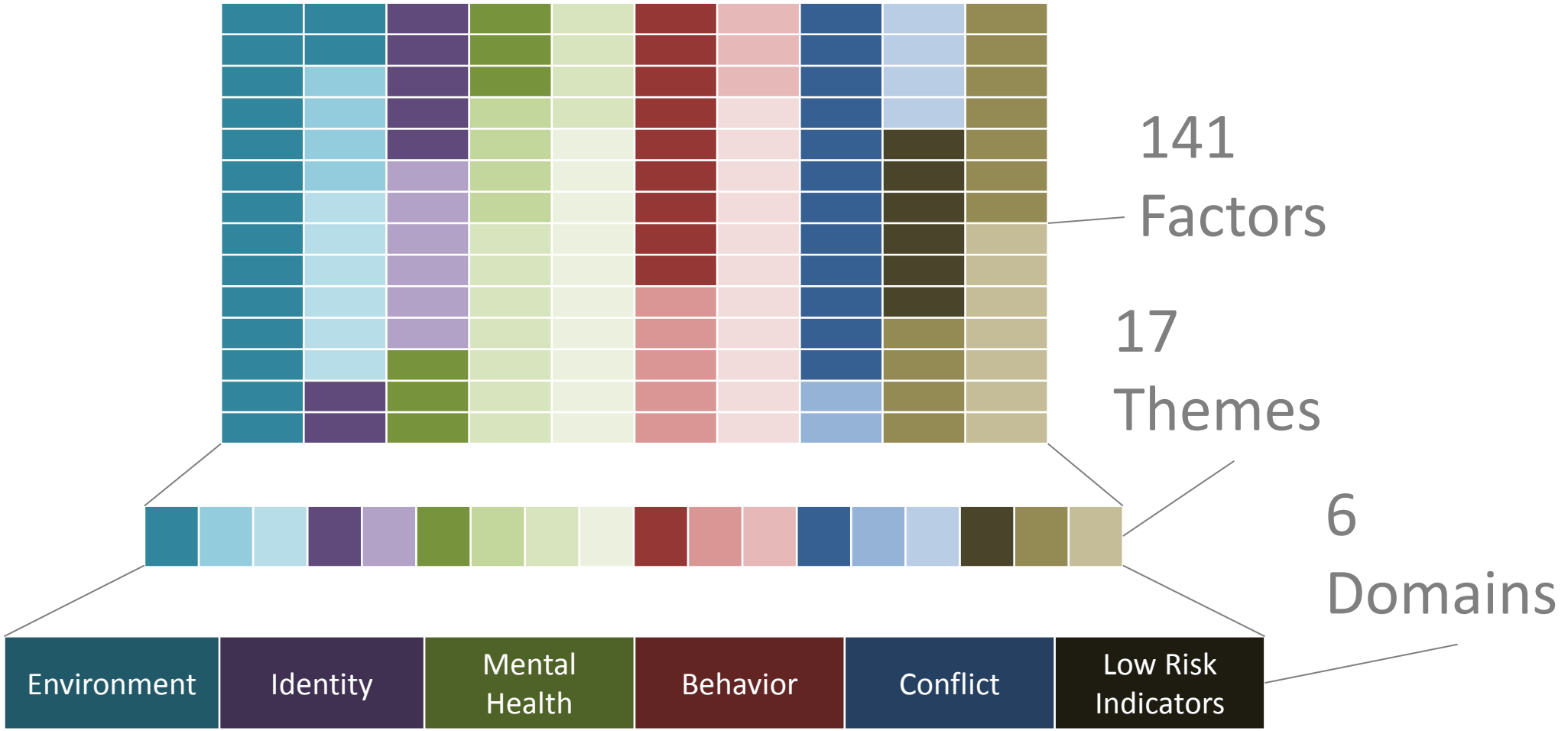
Focus Groups & Interviews

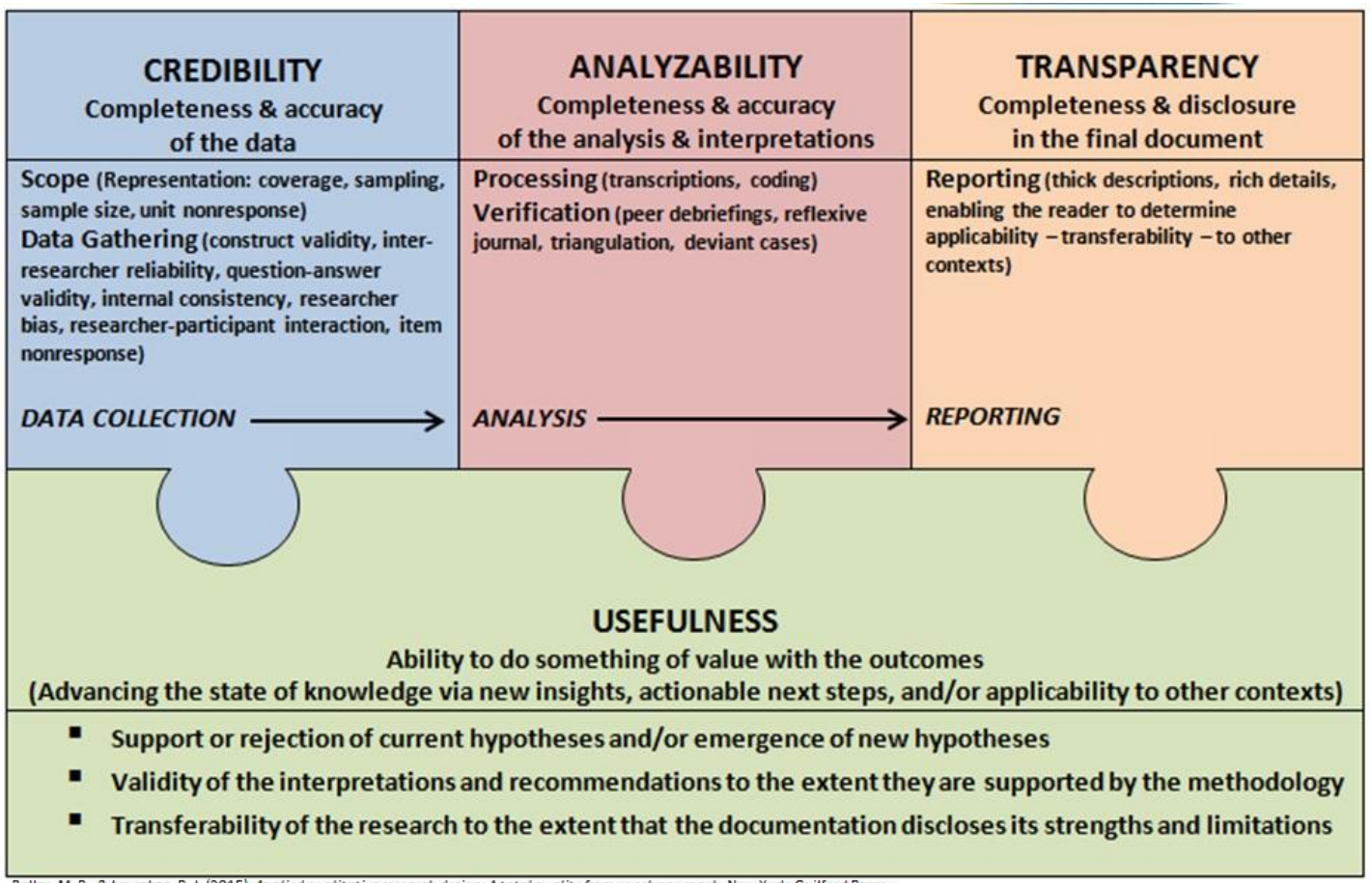


Focus Groups & Interviews

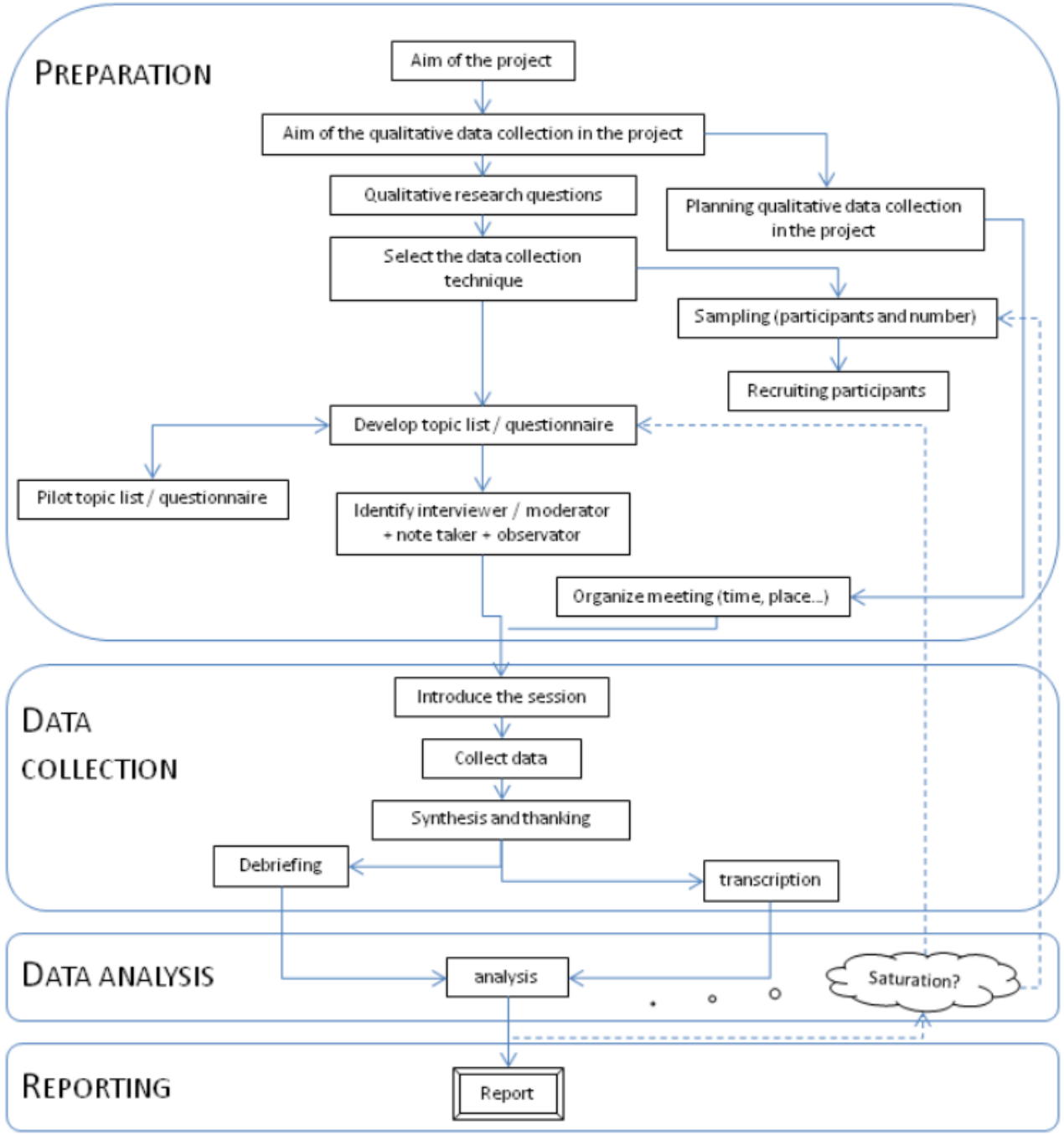


Reporting Qualitative Data

- Format
  - Research article
  - Report to a donor
  - Evaluation
- Focus
  - Academic: background, methods, results and conclusions
  - Practitioners: Suggestions for best practices or policies
  - Lay readers: Problem solving, policy reform
- Writing tips:
  - Use quotes from the data
  - Direct link the data
  - Describe the behavior and experiences of your participants
  - Flow Diagrams



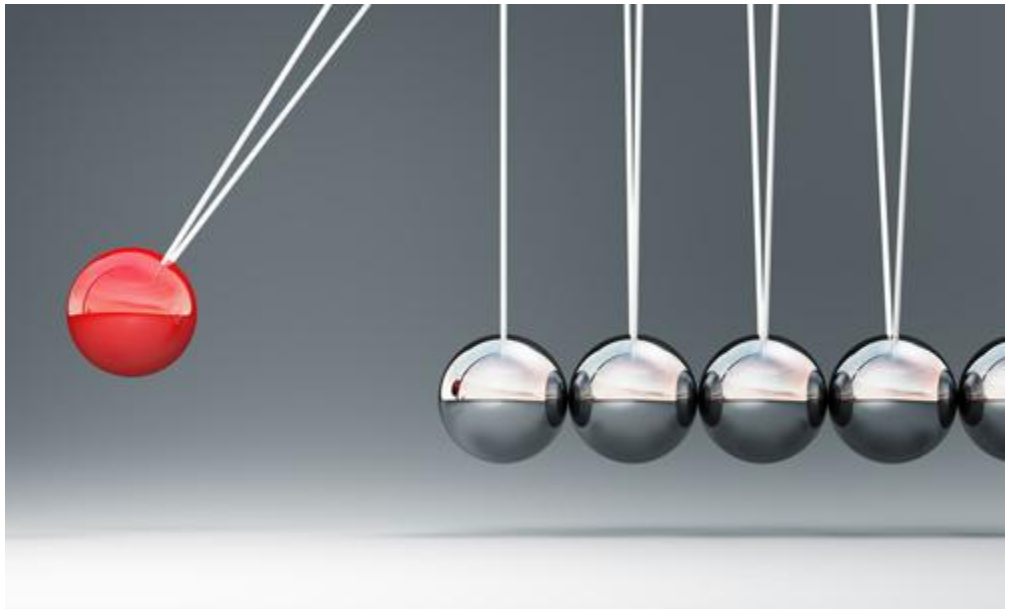
Roller, M. R., & Lavrakas, P. J. (2015). *Applied qualitative research design: A total quality framework approach*. New York: Guilford Press.


PREPARATION
Aim of the project
Aim of the qualitative data collection in the project
Qualitative research questions
Planning qualitative data collection in the project
Select the data collection technique
Sampling (participants and number)
Recruiting participants
Develop topic list / questionnaire
Pilot topic list / questionnaire
Identify interviewer / moderator + note taker + observator
Organize meeting (time, place...)
DATA COLLECTION
Introduce the session
Collect data
Synthesis and thanking
Debriefing
transcription
DATA ANALYSIS
analysis
Saturation?
REPORTING
Report

PandaDoc

Making your data impactful

- What are you going to do to change?
  - Develop a new screening tools
    - AND THEN TEST THEM
  - Suggest program improvement to improve outcomes
    - AND THEN TEST IT
  - Improve patient experience
    - AND THEN TEST IT
  - Improve access to care
    - AND THEN TEST IT



Keeping the Humanism in Research

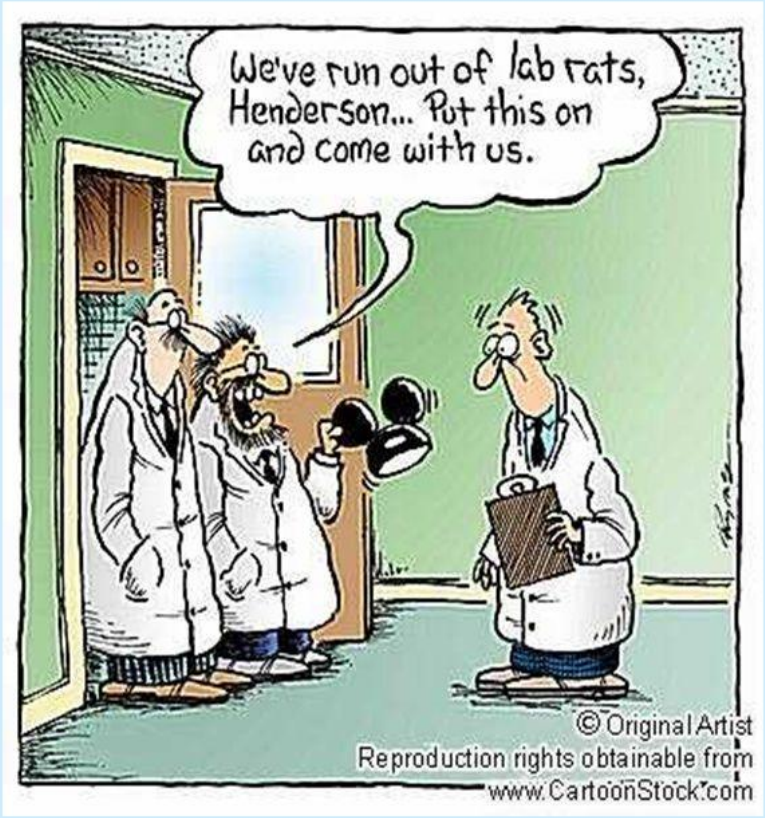
- Use a natural setting
  - Data should be collected in an environment that is comfortable and natural to the participant
- Holism
  - Researcher is responsive
  - Good listener
  - Adaptive to patient responses
- Emergent design
  - Study design emerges and changes as insights are gained
- Saturation or redundancy
  - When additional interviews are not adding new information – stop!

Tips

- Keep notes and refer to them often
- Do a thorough literature review and keep your literature for reference
- Watch for patterns in your data that you might not expect
- Stay organized!
- Get a second opinion or seek expertise

- Take a course, read a book, find a collaborator

Questions?


We've run out of lab rats, Henderson... Put this on and come with us.
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