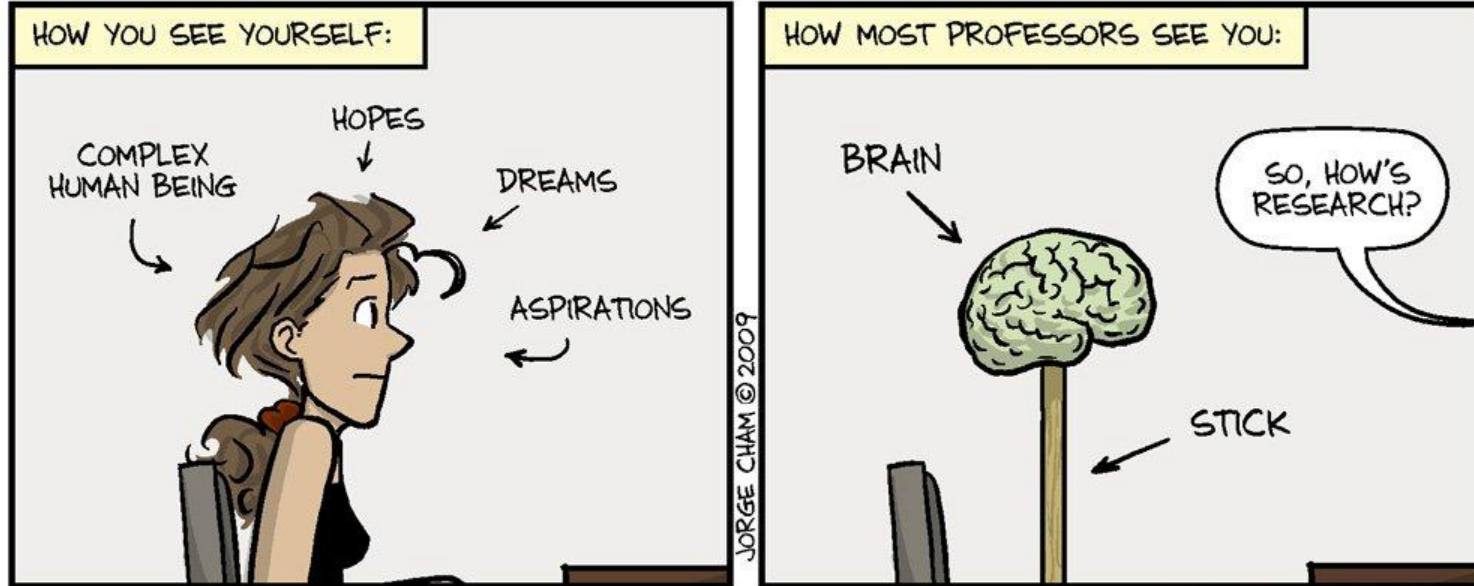


Illustration by PhDcomics from www.phdcomics.com



WWW.PHDCOMICS.COM

RESPONSIBLE PHD SUPERVISION

Tamarinde Haven
Aarhus University

KNOW YOUR AUDIENCE

Go to www.menti.com and use the code **5598 2334**

OUTLINE

Background

- Research integrity & supervision
- Knowledge gaps

Measuring responsible supervision

- Aim & relevance
- Item development & validation

Focus groups

- Design & sampling plan
- Data sources & analysis
- Preliminary results

Discussion

RESEARCH INTEGRITY

Good supervision → ***socialising into***

Codes of Conduct

Bird 2001; Anderson et al., 2007;

Davis et al., 2007

Insufficient supervision → ***undermining***

Bouter et al., 2016; Haven et al.,
2019; 2020

RESPONSIBLE SUPERVISION

- Supervisor is a ***role model***
 - Gray & Jordan, 2012; Kornfeld, 2012
- Supervisor encourages ***responsible research practices***
 - Anderson et al., 2007; Krishna & Peter, 2018; van Noorden, 2018
- Supervisor is able to create a ***psychologically safe climate***
 - Antes & DuBois, 2018; Antes et al., 2019a, 2019b

KNOWLEDGE GAPS

Scoping review of **24 studies** (Pizzolato et al., under review)

One party (exceptions: Buljan, BaraĆ and Marušić 2018, qualitative study)

No **role-modelling**

No **validated** measurement instruments

RELEVANCE

A ***validated instrument*** that builds on views from both parties could:

Raise ***awareness***

Provide an ***evidence-based starting point*** for debate on improving supervision

Support ***development of interventions***

aid in assessing whether these were ***effective***

Could help ***policy development*** by providing a baseline

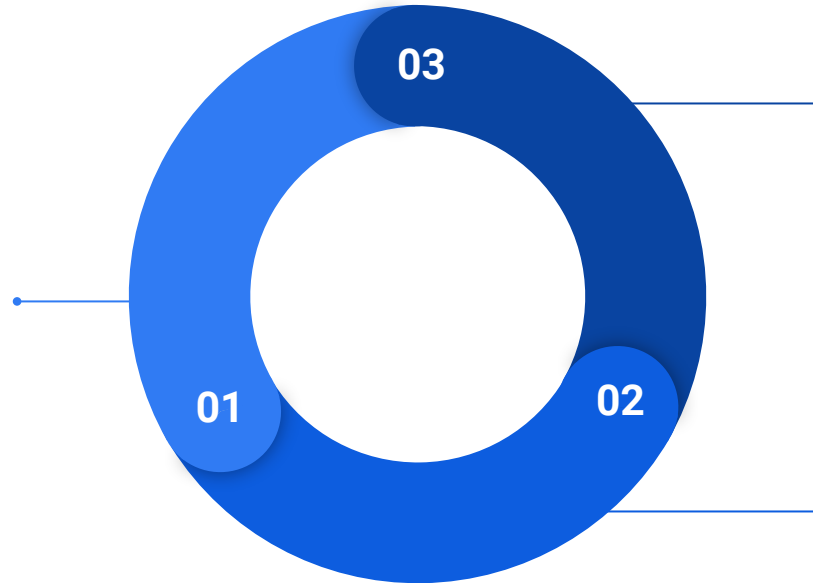
AIM OF THE RESEARCH

This project aims to ***develop, pilot, and validate a measurement instrument*** where PhD supervisors evaluate themselves and are evaluated by their PhD candidates

ITEM DEVELOPMENT

Focus groups

Goal: identify *which practices researchers consider important* and how these *play a role in supervision*



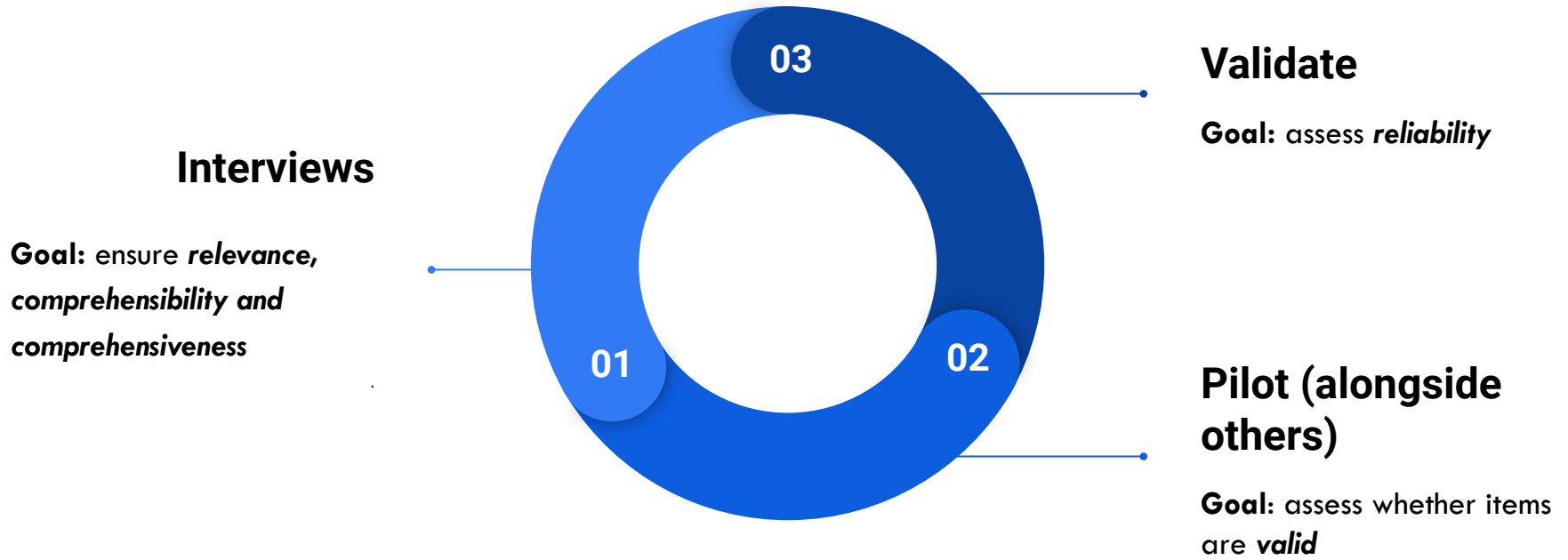
Literature review

Goal: identify items for psychological safety and trust and adapt to the *academic context*

Scientometric study

Goal: assess the *prevalence* of the identified practices

ITEM VALIDATION





Supervisor



Views on my **own**
behaviour

never always

Examples (for illustrative purposes):

I share my data openly

I encourage my PhD student to share his/her data openly

I seek feedback from my PhD candidate on the research project



Views on my
supervisors'
behaviour

never always

Examples (for illustrative purposes):

My supervisor shares data openly

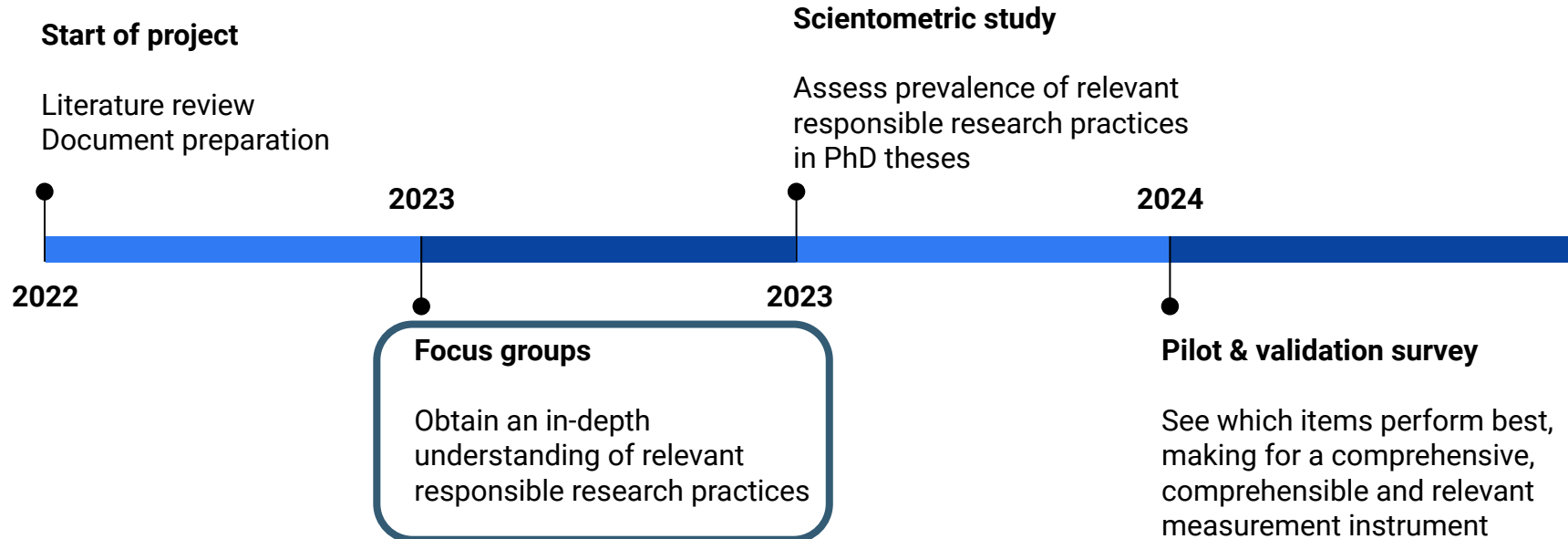
My supervisor encourages me to share my data openly

My supervisor seeks my feedback on the research project



PhD candidate

TIMELINE



FOCUS GROUPS

1) What sort of ***practices or procedures*** do (or could) supervisors engage in to ***promote responsible conduct of research*** among their PhD candidates and

2) which kind of actions or behaviours could promote a ***supervisory relationship*** characterised by ***psychological safety*** and ***organisational trust***?

DESIGN

Homogenous for academic rank

Moderator guide

Interactive exercises

What are the **practices** and **procedures** that you use or look for to assure **research is conducted** and **reported rigorously**?

How do you **bring these** practices and procedures **into supervision**?

Which of these items on **trust**¹ and **psychological safety**² seem relevant and how would they need to be modified?

SAMPLING PLAN

Disciplines	
Social sciences	
Biomedical sciences	
Humanities	
Natural sciences	
Technical sciences	
<i>Total</i>	

DATA SOURCES

- Photos
 - Sticky notes
 - Placement on scale
- Transcripts
 - Explanations and discussion
- Memo's
 - Moderators reflection afterwards
- Member checks
 - Participants checks of summary

DATA ANALYSIS

- Codes from literature (guide)
 - Implicit vs. explicit
 - Conducting vs. reporting
- Emerging codes
 - Practices getting at similar issues

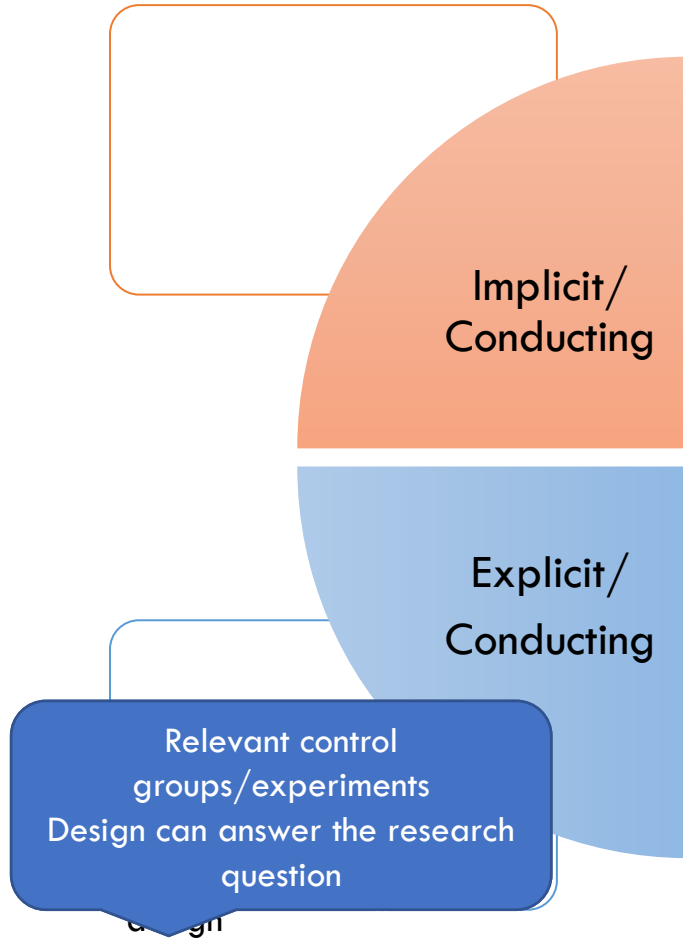
WORK IN PROGRESS

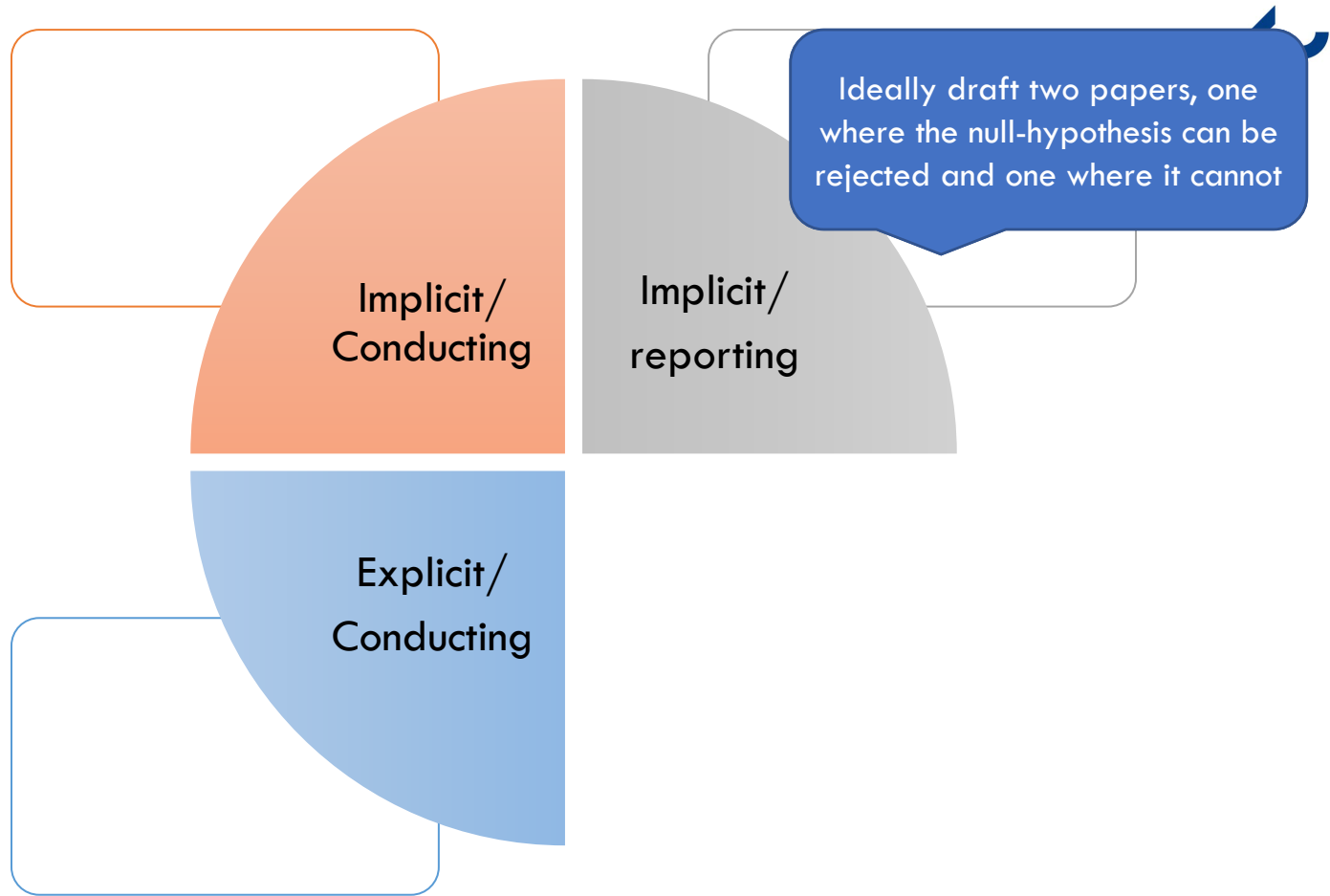


Don't just go for a randomized controlled trial, think about different ways a research question can be addressed.



Implicit/
Conducting



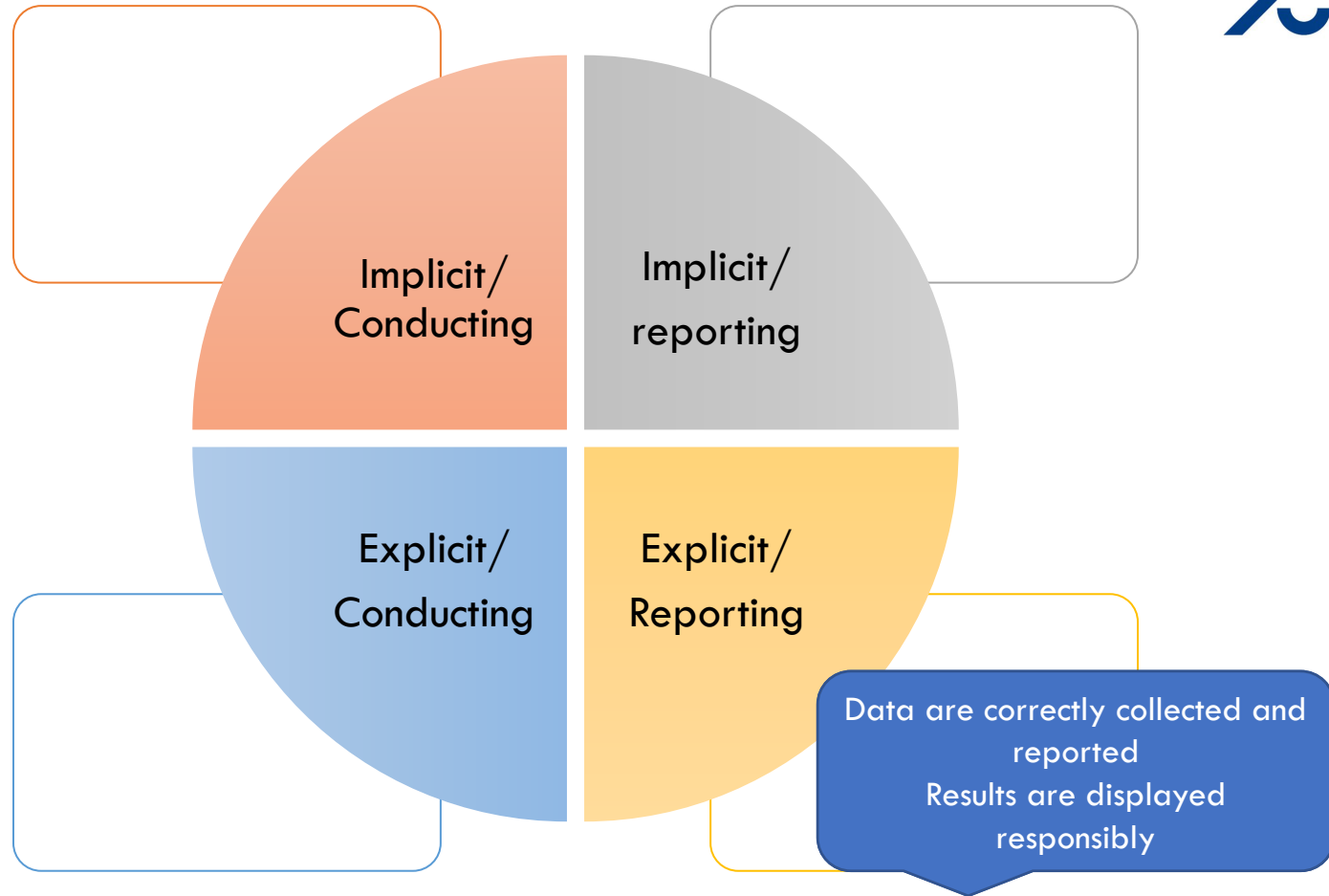


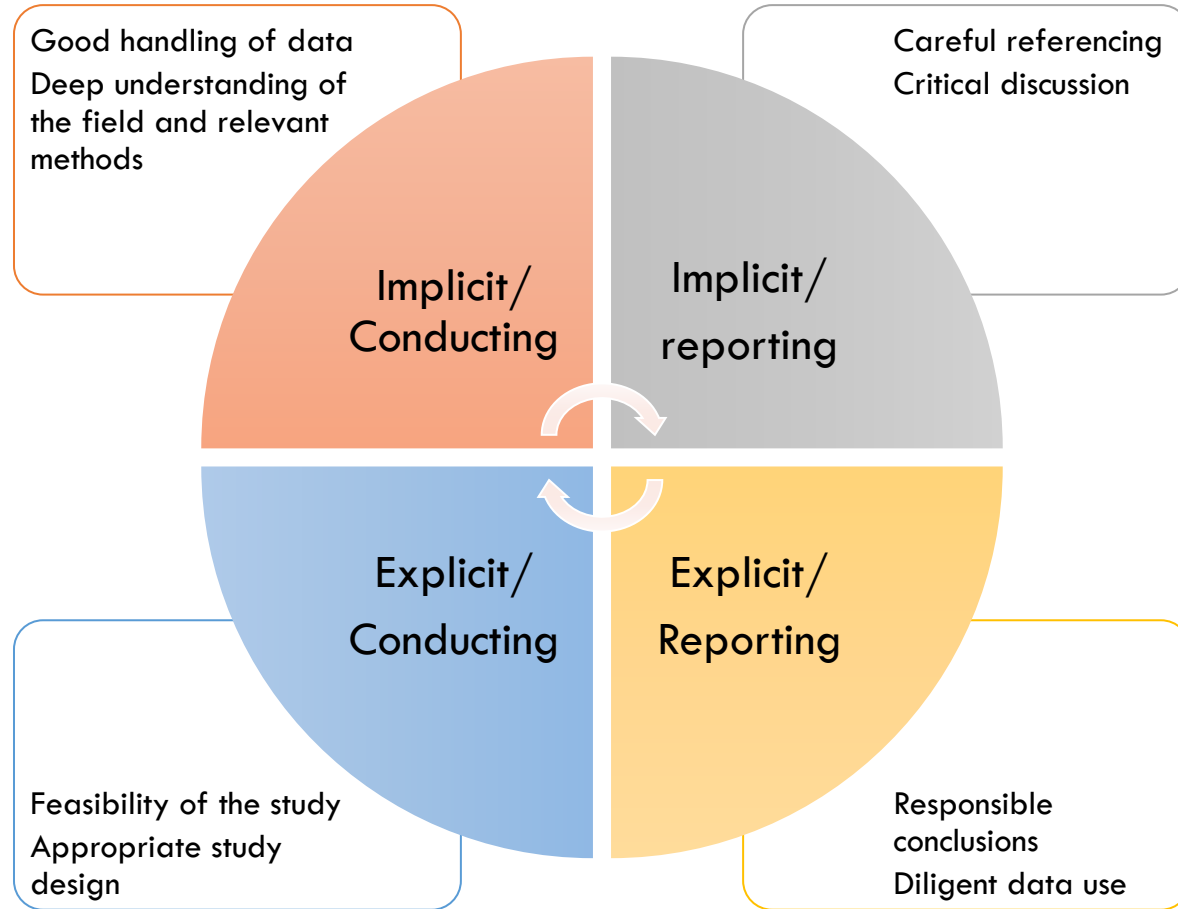
Implicit/
Conducting

Implicit/
reporting

Explicit/
Conducting

Ideally draft two papers, one where the null-hypothesis can be rejected and one where it cannot





DISCUSSION

Only *biomedicine*

Far from *exhaustive*

Partial analysis

Challenge: translating to *measurable*
items