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 $\rightarrow$ **socialising into**
- Codes of Conduct
  - Bird 2001; Anderson et al., 2007;
  - Davis et al., 2007

Insufficient supervision $\rightarrow$ **undermining**
- Bouter et al., 2016; Haven et al., 2019; 2020
RESPONSIBLE SUPERVISION

- **Supervisor is a role model**

- **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, Barač 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

Interviews

Goal: ensure relevance, comprehensibility and comprehensiveness

Validate

Goal: assess reliability

Pilot (alongside others)

Goal: assess whether items are valid
Examples (for illustrative purposes):
1. Share my data openly
2. Encourage my PhD student to share his/her data openly
3. Seek feedback from my PhD candidate on the research project

Views on my own behaviour
- Never
- Always

Views on my supervisors' behaviour
- Never
- Always

Supervisor

PhD candidate
TIMELINE

Start of project
- Literature review
- Document preparation

2022

2023
- Focus groups
  - Obtain an in-depth understanding of relevant responsible research practices

2024
- Pilot & validation survey
  - See which items perform best, making for a comprehensive, comprehensible and relevant measurement instrument

Scientometric study
- Assess prevalence of relevant responsible research practices in PhD theses
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?
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<tr>
<th>Disciplines</th>
<th>Supervisors</th>
<th>PhD candidates</th>
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<td><strong>Total</strong></td>
<td><strong>32</strong></td>
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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
Don’t just go for a randomized controlled trial, think about different ways a research question can be addressed.
Feasibility of the study

Appropriate study design

Is the study doable given the current time & resources
Is the money logically spent; experiments well thought out before starting

Relevant control groups/experiments
Design can answer the research question
Ideally draft two papers, one where the null-hypothesis can be rejected and one where it cannot.
Responsible conclusions
Diligent data use

Implicit/Conducting

Implicit/reporting

Explicit/Conducting

Explicit/Reporting

Data are correctly collected and reported
Results are displayed responsibly
Responsible conclusions
Diligent data use
Feasibility of the study
Appropriate study design
Good handling of data
Deep understanding of the field and relevant methods
Careful referencing
Critical discussion
Explicit/Conducting
Implicit/Conducting
Explicit/Reporting
Implicit/reporting
Feasibility of the study
Appropriate study design
Responsible conclusions
Diligent data use
Implicit/Conducting
Explicit/Conducting
Explicit/Reporting
Implicit/reporting
DISCUSSION

Only *biomedicine*

Far from *exhaustive*

*Partial* analysis

Challenge: translating to *measurable* items