

A Focus Group Study on Detrimental Research Practices in a Dutch Academic Setting

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INTRODUCTION

This focus group study is part of The National Survey on Research Integrity (NSRI*). The NSRI is a globally unique endeavor where the Dutch scientific community will take the lead in acquiring solid empirical evidence for building strategies to reduce detrimental Research Practices (DRP) and foster responsible research in the Netherlands and beyond.

Detrimental Research Practices (DRP):

DRPs denote all major and minor misbehaviors by academic researchers that can be classified as misconduct (fabrication, falsification, and plagiarism (FFP), and practices that constitute more subtle trespasses of ethical and methodological principles that undermine a study's validity, reproducibility, or efficiency (1-3). Such trespasses are also known as 'questionable research practices' (QRPs) or 'sloppy science' (4).

AIM

PRIMARY AIM

- Explore views on the **TOP 5 DRPs as determined from a recent study (5)** per disciplinary field (DF):
 - a) Social & Behavioral Sciences
 - b) Natural & Engineering Sciences,
 - c) Humanities & Arts,

The views on the top 5 DRPs per DF derived from this study will be used to determine modification to the DRPs to be included in the NSRI.

METHOD

Study design

Qualitative study using focus groups (FG).

Participants

Recruitment through convenience sampling of Head of Departments, University Websites, National Academic Associations & via researchers network. Participants recruited from Leiden University (LU), Utrecht University (UU) Amsterdam University (UvA), Free University (VU), & Delft University of Technology (TU Delft).

Procedure

- FG were chaired by a leader and observant, using a semi structured topic guide, based on Top 5 DRPs per DF (5) (see table below).
- Sessions were audiotaped and transcribed verbatim.

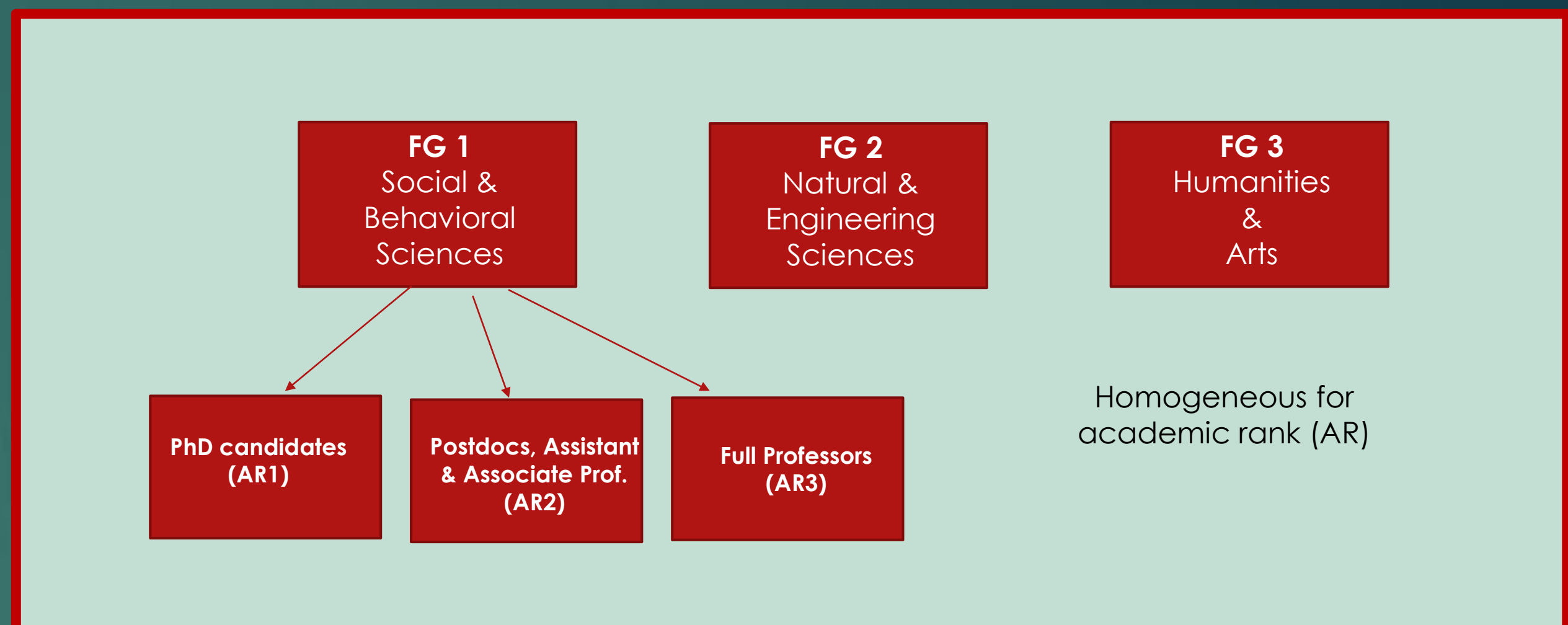
Data analysis

- Inductive content analysis based on grounded theory was used.
- Transcripts were open coded & grouped to identify themes.

TOP 5 IMPORTANT RESEARCH MISBEHAVIORS BY DISCIPLINARY FIELD (5)

Rank	Social & behavioral Sciences	Natural & Engineering Sciences	Humanities & Arts
#1	Insufficiently supervise or mentor junior co-workers.	Insufficiently supervise or mentor junior co-workers.	Insufficiently supervise or mentor junior co-workers.
#2	Not publish a valid 'negative' study.	Not report clearly relevant details of study method.	Use published ideas or phrases of others without referencing.
#3	Let own convictions influence the conclusions substantially.	Insufficiently report study flaws and limitations.	Selectively cite to enhance own findings or convictions.
#4	Choose a clearly inadequate research design or using evidently unsuitable measurement instruments.	Let own convictions influence the conclusions substantially.	Choose a clearly inadequate research design or using evidently unsuitable measurement instruments.
#5	Give insufficient attention to the equipment, skills or expertise which are essential to perform the study.	Give insufficient attention to the equipment, skills or expertise which are essential to perform the study.	Unfairly review papers, grant applications or colleagues applying for promotion.

Focus Groups



RESULTS

In total we had 29 participants (N=415 invited, 29 participated), divided in 8 FG. The minimum number of participants per FG ranged from 2 – 7 researchers per FG.

THEME	MAIN FINDINGS	IMPLICATION FOR NSRI
DRP CONTENT		
DRPs should take into account diversity of disciplinary fields (DF)	<ul style="list-style-type: none"> Diversity within the DFs needs to be taken into account. For instance within the Social Sciences and Humanities, there are sub disciplines that are more empirical than others. It is therefore important to ensure DRPs remain relevant or there is the risk participants might drop out of the survey e.g. DRP: Let own convictions influence conclusions substantially "the real problem is denying your convictions" – Participant; Social Sciences FG "it forces (some) disciplines to adjust to others" – Participant, Social Sciences. Participants felt the existing DRPs were constructed mostly under a "positivist evidence based framework": 	<ul style="list-style-type: none"> - Add the option to skip DRPs that maybe not relevant to survey participants -Consider adding clarifications of a DRP to help respondents understand what it might mean in their DF
Wording/phrasing of DRPs	<ul style="list-style-type: none"> e.g. "Don't push all sciences in the same framework" – Participant; Social Sciences That the choice of wording should consider differences in the DFs e.g DRP: "protocol" vs. "research plan", Participant; Natural and Engineering Sciences 	<ul style="list-style-type: none"> - Take into account normative use of wording and test the relevance of reworded DRPs using FGs at a later stage of this project
STRUCTURE OF THE SURVEY		
Filter respondents and DRPs	<ul style="list-style-type: none"> Some participants felt it important that other types of roles of responders be captured as this can influence their views on the DRPs e.g. "I think a junior researcher is mainly focused on eh, the environment and the work pressure... And the supervisor and the behavior of the supervisor director", Participant; Social Sciences Some DRPs are very specific at the individual level; others more all encompassing e.g. DRP: "Insufficient supervision" vs. "Take no full responsibility for the integrity of the research project" 	<ul style="list-style-type: none"> - Consider adding more layers of refinement for demographics of respondents as well as type of DRPs: individual level vs more systematic level
GENERAL SUGGESTIONS		
Definition of "most important" DRP	<ul style="list-style-type: none"> Participants struggled to choose between DRPs which were most impactful to science vs those that were less impactful but more frequent e.g. "Is this frequency or impact or both", Participant; Natural and Engineering Sciences 	<ul style="list-style-type: none"> - Decide whether DRPs will be selected based on most frequent and most impactful or if a differentiation should be made between the two measures for the NSRI survey
Include other questions	<ul style="list-style-type: none"> Participants felt the NSRI should also address improvements in responsible research practices e.g. After participants were asked which was the main message to take from the FG, a participant said: "Which is that we would miss the point of developments and improvements that have been made.", Participant; Social Sciences 	<ul style="list-style-type: none"> -Consider the inclusion of a drop down list of improvements seen in the DFs for respondents to select

CONCLUSION

The FGs provided us useful insight on the relevance of the Top 5 DRPs from a previous study (5) for their disciplinary fields.

Because the disciplinary fields are very diverse, we will need to be careful in how the DRPs are worded such that they are relevant to the different backgrounds or provide options to elaborate or opt out when not relevant.

We plan to further test the newly worded DRPs with a new round of FGs from the different DFs to ensure relevancy.

REFERENCES

For study references scan the QR code



MORE INFO.

Please visit our website for further information on the National Survey on Research Integrity study.

* www.nstri2020.nl or scan the QR code

