What can research institutes do to foster research integrity?

Lex Bouter
QRPs are more important than FFP
Researchers need support to prevent QRPs
Research institutes have duties of care
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ACADEMIC RESEARCH CLIMATE
AMSTERDAM
Researchers’ perceptions of research misbehaviours: a mixed methods study among academic researchers in Amsterdam
Top 5 – aggregated impact

1. Insufficiently *supervise* or mentor junior coworkers
2. Let own *convictions influence* the conclusions substantially
3. Choose a clearly *inadequate* research *design* or using evidently unsuitable *measurement instruments*
4. *Not publish* a valid ‘negative’ study
5. Give insufficient attention to the *equipment, skills* or *expertise* which are essential to perform the study
Too much focus on FFP
Functioning of moral compass depends on:

- Individual virtuousness
- Research climate
- Perverse incentives
How things can go wrong

- Personal interests
- QRP & RM
- Sponsor interests
- (false) positive results
- Publications
- Citations
- Media attention
- Grants & tenure

How things can go wrong
Important tools to get positive results

- Selective reporting
- Low power
- P-hacking
- HARKing

Hypothesizing After Results are Known
Degrees of Freedom in Planning, Running, Analyzing, and Reporting Psychological Studies: A Checklist to Avoid $p$-Hacking

Jelte M. Wicherts *, Coosje L. S. Veldkamp, Hilde E. M. Augusteijn, Marjan Bakker, Robbie C. M. van Aert and Marcel A. L. M. van Assen

34 Researcher Degrees of Freedom that can be used to get Positive Results
1. Have clear codes, guidelines and SOPs

That explain what is expected behaviour in operational terms
Welcome to the quality handbook that was developed by the EMGO+ Institute for Health and Care Research. This manual contains guidelines for a wide variety of topics, covering your research project from the start to the finish. The content of the guidelines was updated in 2017 with the help of key experts in our organization. If you have any questions or comments, please do not hesitate to contact the quality committee by pressing the button on the right.
ORIGINAL ARTICLE

Responsible Epidemiologic Research Practice: a guideline developed by a working group of the Netherlands Epidemiological Society

Gerard M.H. Swaen\textsuperscript{a,*}, Miranda Langendam\textsuperscript{b}, Joost Weyler\textsuperscript{c}, Huibert Burger\textsuperscript{d}, Sabine Siesling\textsuperscript{e}, Willem Jan Atsma\textsuperscript{f}, Lex Bouter\textsuperscript{g}
2. Have fair procedures for handling allegations

That protect both the whistleblowers and the scientists they accuse

ACCOUNTABILITY IN RESEARCH
2017, VOL. 24, NO. 6, 359–366
https://doi.org/10.1080/08989621.2017.1327814

COMMENTARY

Both Whistleblowers and the Scientists They Accuse Are Vulnerable and Deserve Protection

Lex M. Bouter, Ph.D.\textsuperscript{a,b} and Sven Hendrix, M.D., Ph.D.\textsuperscript{c}
<table>
<thead>
<tr>
<th>Perceived severity and seriousness of misconduct to be reported</th>
<th>Potential impact on personal and professional life of one raising concern</th>
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<tbody>
<tr>
<td>High Impact on Science Low Impact on Researcher</td>
<td>DO NOT RAISE CONCERN</td>
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<td>RAISE CONCERN</td>
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<tr>
<td>POSSIBLY RAISE CONCERN BUT PROBABLY DO NOT</td>
<td>RESEARCHER’S DISCRETION</td>
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3. Provide adequate mentoring and training in RCR

Which is likely to be important not only for PhD students

- PhD and postdoc RI courses are common
- No ‘Licence to Supervise’
- Insufficient mentoring is QRP #1
- Good role models are important
- Integration of mentoring skills + RI skills
Superb supervision junior – a course for junior PhD supervisors

3 dagen
4. Provide methodological and statistical support
Because many QRPs have to do with poor methods

5. Have a system of internal audits
Which is so often ignored in academia

6. Have good facilities for data-management and storage
Using web-based solutions for being transparent and accountable
Research data are
Findable, Accessible, Interoperable and Reusable
7. Remove the perverse incentives in the reward system

And do not only count publications and citations

The Leiden Manifesto for research metrics
What are the HKP?
The Hong Kong Principles (HKP) were developed as part of the 6th World Conference on Research Integrity. They were developed to reinforce the need to ensure that researchers are rewarded for specific behaviors that promote trustworthy research.
Hong Kong Principles

1. Assess responsible research practices
2. Value complete reporting
3. Reward the practice of Open Science
4. Acknowledge a broad range of research activities
5. Recognize essential other tasks like peer review and mentoring
8. promote an open research climate

With open discussion of dilemmas and learning from mistakes
Perceptions of research integrity climate differ between academic ranks and disciplinary fields: Results from a survey among academic researchers in Amsterdam

Tamarinde L. Haven\textsuperscript{1,*}, Joeri K. Tijdink\textsuperscript{1,2}, Brian C. Martinson\textsuperscript{3}, Lex M. Bouter\textsuperscript{1,2}
junior researchers perceive the research integrity climate more negatively than senior researchers

junior researchers note that their supervisors are too little committed to talk about key research integrity principles

PhD students perceive more competition and suspicion among colleagues than associate and full professors

researchers from the natural sciences have a more positive perception of the research integrity climate

Researchers from social sciences as well as from the humanities perceive less fairness of their departments’ expectations in terms of publishing and acquiring funding
What Research Institutions Can Do to Foster Research Integrity

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