



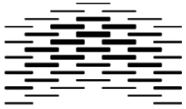
Organizational influences on research misconduct: Insights from a multinational survey

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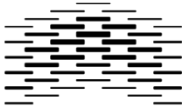
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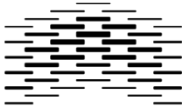
Motivation

- Research misconduct has generally been studied as an individual phenomenon (
- Surveys with small sample sizes and with focus on USA and the hard sciences



Contribution

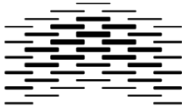
- We focus on organizational factors rather than only on the individual factors
- Research is based on a unique survey:
 - 8 universities in 7 European countries
 - All academic positions and major science fields
- Larger sample size (n=1126)



Prior literature

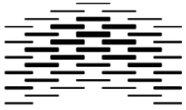
– Age, gender, ESR	Mixed results or ns.
– Medical-life sciences	Positive +
– Cash-based publication incentives	Positive +
– Pressure to publish	Positive +
– Satisfaction with work	Negative -
– Peer-control	Negative -
– National misconduct policies	Negative -

Sources: Fanelli, 2009; Pupovac & Fanelli 2015; Andreoli & Lefkowitz 2008; O’Fallon & Butterfield 2005; Fanelli *et al.* 2017; Joeri *et al.* 2014



Hypotheses

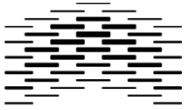
- Work environment
 - Pressure to publish, competition for positions, low penalties and low chances of getting caught + + + + + + + + +
 - Work satisfaction and work identity - - - - - - - -
 - Knowledge of policies and regulations - - - - - - - -
- Prevention
 - Monitoring and leader follow up - - - - - - - -
 - Information about policies and regulations - - - - - - - -
 - Fostering a culture of openness - - - - - - - -



PRINTEGER QuestBack survey

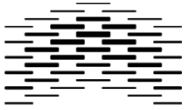
- **Prevalence of FFP and QRP**
- **Organisational policies and work environment**
- **Demographics**

- Integrity measures
- Perceived tensions and risks
- Mechanisms for and attitudes towards whistleblowing
- Factors affecting research quality
- Qualitative questions on first-hand knowledge



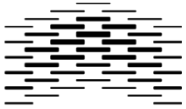
Population and survey facts

- Academic staff (not TA): **20,815**
- Data collection period: 7. March–1. August 2017
 - **Gross** **1 211 (5.8 %)**
 - **Net** **1 126 (5.4 %)**
 - **Response rates higher for females, increased by age and varied by university (0.3%-16%)**



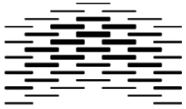
Methods

- Bi-variate logistic regressions (with 95% KI)
- Multivariate logistic regression (with 95% KI)



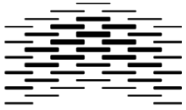
Dependent variables

- Non self-admissions of FFP and QRP
 - «Have you known about or justifiably suspected that any of the colleagues in your faculty during the last 12 months has...»
- «Yes» on at least one of FFPs is coded 1, otherwise 0
 - fabrication, falsification and plagiarism
- «Yes» on at least one of 7 QRP items is coded 1, otherwise 0
 - dropping and withholding data, “fishing”, falsification of bio-sketch or personal references, non-disclosure of conflicts of interests, claimed undeserved authorship or denied authorship to contributors



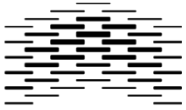
Independent variables

- Policies for raising awareness for misconduct and integrity and management focus on these issues
- Work environment I
 - Scarcity of positions and obtaining tenure
 - Pressure to publish and obtain funding
 - Risks of getting caught and penalties
 - Understanding and support of rules and procedures
- Work environment II
 - Openness, hierarchy, pressure and workload



Demographics

- Age
- Gender
- Academic degree, field, position and appointment
- Management/leader-role
- University
- How satisfied are you with your current work situation?
- Do you identify with the professional culture and values of your department?



Significant bi-variate associations: FFP

Organizational variables

Demographics

5.2 % on average

Decreased risk:

- High penalties and high risk of getting caught;
- Open discussions and strong focus on research integrity (managers)
- Understanding of rules and procedures (researchers)
- Support of rules and procedures (management)

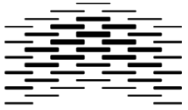
Increased risk: pressure (commercialize); economic incentives (acquisition, publishing); strong hierarchy; afraid someone will steal your ideas; no written policies (university)

Decreased risk:

- Work-identity
- Well-being

Increased risk:

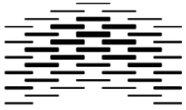
University («other»)



HØGSKOLEN I OSLO
OG AKERSHUS

Multivariate model: FFP

– No significant effects



Significant bi-variate associations: QRP

Organizational variables

Demographics

36.8% on average

Decreased risk:

High penalties and high risk of getting caught

- Understanding/support of rules and procedures (researchers/managers)
- Strong focus on integrity (managers)
- Open discussions and shared understanding on misconduct/integrity

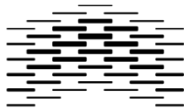
Increased risk: Pressure and economic incentives (funding, publish, commercialize); strong hierarchy; afraid someone will steal your ideas; no written policies (department)

Decreased risk:

- Work-identity
- Well-being
- Lang/info/com
- Law/art/hum
- Natural sciences

Increased risk:

- Number of publications
- Females
- University (3 and «other»)
- Medical-life sciences
- Post-doc



Significant multivariate associations: QRP (red)

Organizational variables

Demographics

36.8% on average

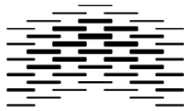
- Variables are highly correlated and explains same variation
- To avoid multicollinearity and high standard errors all variables cannot be included

Decreased risk:

- **Work-identity**
- Well-being
- Lang/info/com
- **Law/art/hum**
- **Natural sciences**

Increased risk:

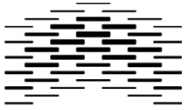
- **Number of publications**
- **Females**
- **University (4 and «other»)**
- **Medical-life sciences**
- Post-doc



Prior meta studies

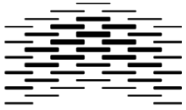
	Falsification and Fabrication	Plagiarism	QRP
Non-self admission	14.1% (9.9-19.7)	30% (17-46)	28.5 (18.9-38.2) Max 72%
Self-admission	2.0 % (0.9-4.5)	1.7% (1.2-2.4)	9.54 (5.2-13.9) Max 33.7%

Fanelli 2009: Pupovac and Fanelli 2015



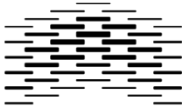
Why low % FFP/QRP in our survey?

- Respondents primed about aims, data protection, ethics and anonymity twice (7 % n=85 opted out after the first question)
- Window for measuring misconduct shorter (last 12 months vs. lifetime prevalence in studies incl. in meta-analyses)
- We asked generic rather than direct questions
- Europe is different from USA?
- Prior studies focused on medical-life sciences with higher risks



Conclusion

- Systematic focus on well-being, identity-building, open and shared understanding, the work environment, and building down hierarchies, **might** prevent scientific misconduct



Limitations and ongoing work

- Low response rate
 - Research on “extremely” low non-response (4%) and response bias shows that results are not necessarily biased (Hellevik 2016)
- Cross-sectional design
- Ongoing work
 - Work out full multivariate organisational model with control for demographics
 - One possibility is model used by Fanelli, Costas *et al.* 2017
 - Peer control, misconduct policies, cash based incentives