



RESEARCH INTEGRITY AND ETHICS IN RESEARCH

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Lisbon, November 2015



*RESPONSIBLE
RESEARCH AND
INNOVATION*



*BENEFITS OF SCIENCE
FOR HUMANITY*

RISK MANAGEMENT

*ETHICAL
ACCEPTABILITY*

SCIENTIFIC INTEGRITY

RESEARCH MISCONDUCT IS IT TRUE?

“FFP”

FALSIFICATION
FABRICATION
PLAGIARISM

RESEARCH ETHICS IT IS ETHICAL?

PUBLICATION MISCONDUCT

PERSONAL MISCONDUCT

RESEARCH ETHICS
MISCONDUCT

SOCIAL RESPONSIBLE RESEARCH IS IT WISE?



OECD definition of FFP(OECD
(2008) *Best Practices for
Ensuring Scientific Integrity and
Preventing Misconduct.*
[http://www.oecd.org/sti/sci-
tech/40188303.pdf](http://www.oecd.org/sti/sci-tech/40188303.pdf))

FABRICATION OF DATA i.e.
making up results and recording or
reporting them.

FALSIFICATION OF DATA i.e.
manipulating research, materials,
equipment or processes; changing
or omitting data or results such that
the research is not accurately
represented in the research record.

PLAGIARISM i.e. the
appropriation of another person's
ideas, processes, results, or words
without giving due credit, including
those obtained through confidential
review of others' research proposals
and manuscripts.



RESEARCH ETHICS

IT IS ETHICAL?



PUBLICATION MISCONDUCT

(e.g. claiming undeserved authorship; denying authorship to contributors; artificially proliferating publications; failure to correct the publication record)

PERSONAL MISCONDUCT

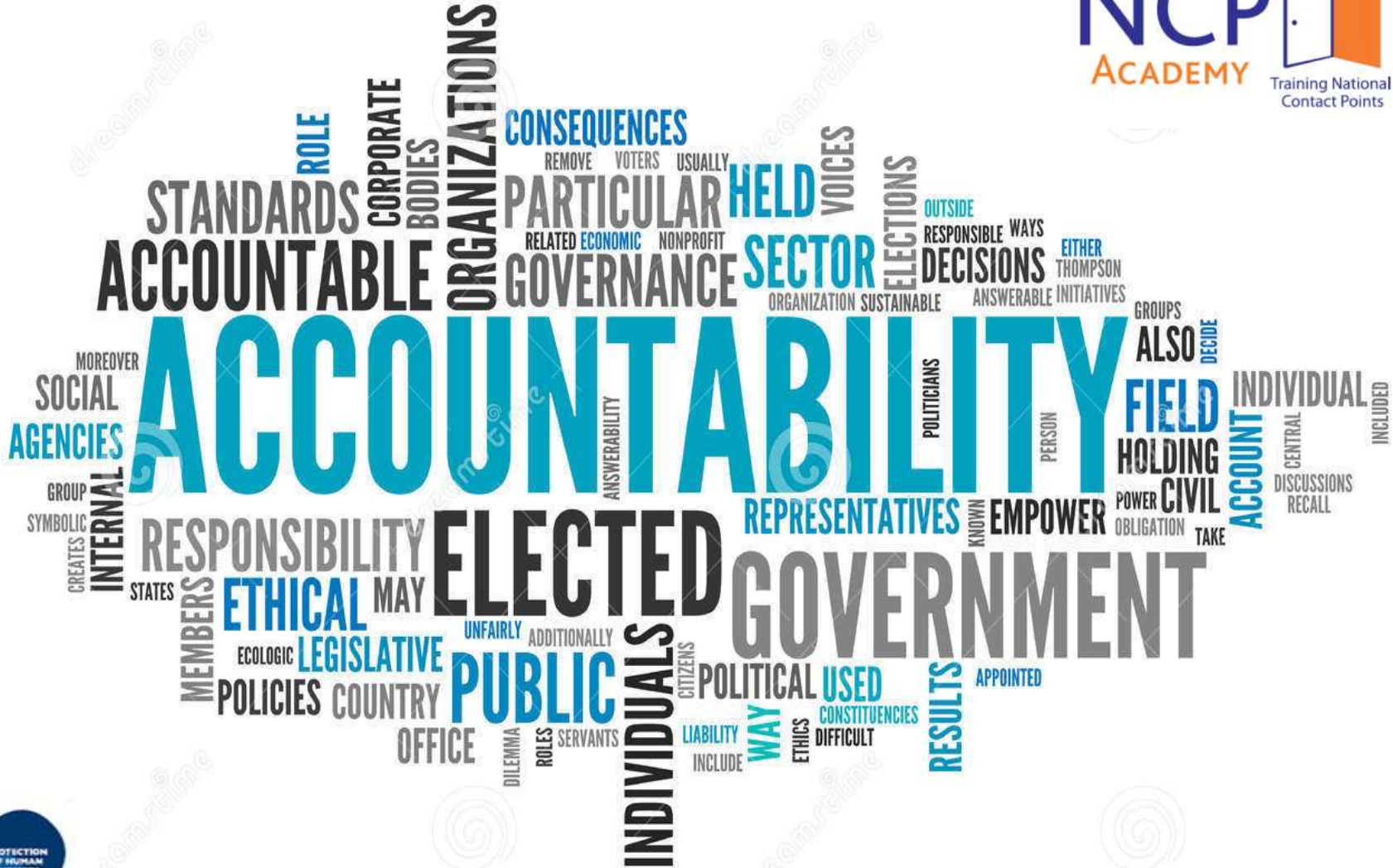
(e.g. inadequate leadership/mentoring of next generation of researchers and scholars; inappropriate personal behaviour and harassment, peer review abuse, non-disclosure of a conflict of interest)

RESEARCH ETHICS MISCONDUCT

(e.g. inadequate ethical behaviour with human research participants, inadequate ethical behaviour with research animals, poor research design; using inappropriate (harmful or dangerous) research methods; inadequate data protection (not preserving primary data; poor data management and/or storage; withholding data from the research community)

SOCIAL REPOSIBILITY

ACCOUNTABILITY





intellectual property

intellectualism

think

Scientific

writing

Serious misconduct

standards

case

hard

integrity

conflict of interest

professionalism

honesty

plagiarism

methodological

claiming

data

idea

respect

authorship

copy-paste

strongest standards

codes of conduct

formulate wrong

sufficient

ethical behaviour

attitudes

RESEARCH MISCONDUCT: SOME NUMBERS



Geggie D, *J Med Ethics*

194 newly appointed medical consultants in the UK 55.7% of respondents had observed some form of research misconduct in a colleague, with 10.8% having first-hand knowledge of the intentional altering or fabrication of data



Pryor et al., *J Med Ethics* (2007)

- 1,645 coordinators of clinical trials in the US
- **18% had first-hand experience with an incident of misconduct**



Titus et al., *Nature* (2008)

- 2,212 researchers across biosciences in receipt of NIH funding
- 3 per 100 researchers per year reported misconduct

RESEARCH MISCONDUCT: SOME NUMBERS



Bedeian et al., *Ac Manag Learn Ed* (2010)

384 management science faculty in 101 universities in US 27% observed/heard about data falsification in colleagues in past year



John et al., *Psychological Science* (2012)

1,436 academic psychologists across the US
10% had introduced false data into the scientific record; 36% admitted to other questionable research and publication practices



Necker, *Research Policy* (2014)

631 European economists asked about their research practices
18% had first-hand experience with an incident of misconduct

META-ANALYSIS OF SURVEY DATA

Fanelli, *PLOS-One* (2009)

Systematic review of 21 surveys on levels of misconduct over past 25 years (pooled weighted averages)



OWN BEHAVIOUR

1.97% admitted fabrication, falsification or data modification at least once

33.7% admitted other questionable research practices



WITNESSED IN COLLEAGUES

14.1% witnessed fabrication, falsification or data modification at least once

72% witnessed other questionable research practices

Why does research misconduct happen?



Can pressure to publish act as a perverse incentive?



Can pressure to obtain research funding act as a perverse incentive?



What are the impact of research misconduct?

*IMPACT OF
MISCONDUCT IN THE
CLINICAL RESEARCH*

*THE COLLATERAL
DAMAGE OF
MISCONDUCT*

*THE FINANCIAL
COSTS OF
MISCONDUCT*



Promoting research integrity and preventing misconduct



TRAINING AS A TOOL FOR PROMOTION AND PREVENTION OF RESEARCH MISCONDUCT



THE CHARACTERISTICS OF THE ENVIRONMENT IN WHICH RESEARCHERS WORK MAY BE JUST AS IMPORTANT IN DETERMINING THEIR BEHAVIOUR AS THE TRAINING THEY RECEIVE IN RESEARCH INTEGRITY

RESPONSE ABILITY

TRANSFORMING VALUES INTO ACTION