Research integrity

What is research integrity?

In order to define research integrity (RI), it is useful to summarise an article by Nick Steneck. He says that research behaviours can be put into three categories: deliberate misconduct, commonly defined as fabrication, falsification, and plagiarism (FFP); questionable research practices (QRP); and responsible conduct of research (RCR). RCR represents the ideal standard institutions and individuals endeavour to meet. FFP encompasses practices everyone agrees should be avoided. QRP fall some place in between.

RCR can be defined as conducting research in ways that fulfil the professional responsibilities of researchers, as defined by their professional organisations, the institutions for which they work and, when relevant, the government and public. The term ***"research integrity"*** refers to a characterisation or an evaluation of research behaviour. Research integrity could be defined as the quality of possessing and steadfastly adhering to high moral principles and professional standards, as outlined by professional organisations, research institutions and, when relevant, the government and public. Over the last 5 years, evidence has accumulated that appears to puts the level of occurrence for serious misconduct near 1%.

What is the difference between ethics and integrity? Research ethics is research behaviour viewed from the perspective of moral principles, and research integrity is research behaviour viewed from the perspective of professional standards.

Questionable research practices (QRP) include ***misrepresentation:*** researchers should honestly and accurately represent their contributions to research publications, but studies have shown that significant numbers do not; ***inaccuracy:*** research misconduct policies commonly exclude honest errors and careless mistakes; ***bias:*** research strives to bring objectivity to investigations, implying that researchers should make reasonable efforts to separate personal, subjective views from experimentally based factual information.

Fabrication, Falsification and Plagiarism (FFP)

It can be questioned how much the three presumed most serious research misbehaviours, FFP, adversely impact the research record or society. Plagiarism has no necessary impact on the reliability of the research record. It may waste some funds used to review and publish a plagiarised article, or to pay a person who may not deserve a particular position or promotion, or it can undermine trust and potentially cause some public harm, if a plagiarist is not truly an expert in some field of study and is called upon to give advice in that area. However, the extent of the impact of plagiarism on research is probably small in comparison to other irresponsible behaviours. In contrast, **fabrication and falsification** obviously can have significant impacts on research. A researcher who intentionally publishes fabricated or falsified research results clearly undermines the reliability of the research record and of all decisions and/or relationships based on that research. Simply based on higher levels of occurrence, QRP should have proportionally greater impacts on research than FFP. QRP probably has its greatest impact in the area of research-based, health-care decisions, e.g. new drugs, new medical devices and procedures, new treatment, etc. The growing body of research on research integrity clearly shows that the public's investment in research is not adequately protected from irresponsible practice. Research findings also strongly suggest that the greatest public harm in terms of wasted dollars and questionable health-care decisions stems from QRP, not FFP.

Reference

- Steneck NH. Fostering integrity in research: definitions, current knowledge, and future directions. Science and Engineering Ethics (2006) 12, 53-74.

The Singapore Statement on Research Integrity

- http://www.singaporestatement.org/statement.html
- http://www.singaporestatement.org/downloads/singpore%20statement_A4size.pdf

The principles and responsibilities set out in the Singapore Statement on Research Integrity represent the first international effort to encourage the development of unified policies, guidelines and codes of conduct, with the long-range goal of fostering greater integrity in research worldwide.

The Statement is the product of the collective effort and insights of the 340 individuals from 51 countries who participated in the 2nd World Conference on Research Integrity. These included researchers, funders, representatives of research institutions (universities and research institutes) and research publishers. The Statement was developed by a small drafting committee; discussed and commented upon before, during and after the 2nd World Conference; and then finalised for release and global use on 22 September 2010.

The 3rd World Conference on Research Integrity was held in Montreal, Canada, from 5-8 May 2013.

The Montreal Statement on Research Integrity in Cross-Boundary Research Collaborations

http://www.researchintegrity.org/Statements/Montreal%20Statement%20English.pdf

The 4th World Conference on Research Integrity will be held in Rio de Janeiro, Brazil, from 31 May to 3 June 2015.

The Office of Research Integrity of the United States Dept of Health & Human Services (http://ori.hhs.gov **)**

The Office of Research Integrity (ORI) oversees and directs Public Health Service (PHS) research integrity activities on behalf of the Secretary of Health and Human Services with the exception of the regulatory research integrity activities of the Food and Drug Administration. The ORI publishes misconduct case summaries (http://ori.hhs.gov/case_summary) and a regular newsletter (http://ori.hhs.gov/newsletters). They also provide information on how to handle research misconduct, forensic tools, and RCR resources. The ORI can also be followed on Twitter at @HHS_ORI.

The RIO has the following available as well: ***The Lab*** is an **educational interactive video** designed to educate viewers about responsible conduct of research (RCR) and research integrity issues. The intended audience for this study includes graduate students, postdoctoral fellows, faculty, research staff, administrators and research integrity officers (RIOs). During the course of the video: the viewer is presented with a scenario about an ethical dilemma, they must choose which perspective from which to engage the scenario (i.e. graduate student, postdoctoral fellow, principle investigator, or RIO); and they are required to make ethical decisions at key points in the storyline. The user's ethical decisions determine how the story unfolds. The Lab can be accessed at: http://ori.hhs.gov/TheLab/TheLab.shtml

Research integrity at the MRC

The MRC has a policy on research integrity, which was last updated in 2008. It needs to be revised; any comments and inputs are welcome. (pdf format, 215 kb)

Documents available

Here is a list of articles and webpages on research integrity.

- BBC News - Viewpoint: The spectre of plagiarism haunting Europe
- Can journalists uncover misconduct ○ Listen to the misconduct session
- Challenging the integrity of the scientist
- Confronting misconduct
- Elsevier and plagiarism
- Guidance on research integrity: no union in Europe
- How academic standards disappear
- Policies and Initiatives Aimed at Addressing Research Misconduct in High-Income Countries
- Pursuing Potential Research Participants Protections: Guiding Principles for Ethical Research
- Redefine misconduct as distorted reporting
- Research Misconduct in Low- and Middle-Income Countries Self-plagiarism scandal