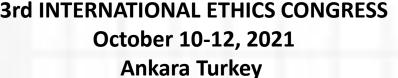


IZDAS KONGRE

ULUSAL ve ULUSLARARASI KATILIMLI & HAKEMLİ







THE MAJOR CAUSES OF SCIENTIFIC RESEARCH MISCONDUCT

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1.0 INTRODUCTION

- Researchers' integrity is one of the main concerns in the world as they are finding,
 presenting and reporting new solution to the world for every aspects of life.
- Research misconduct (RM) has been defined as <u>fabrication</u>, <u>falsification and plagiarism</u> of scientific data along the process of completing the research objective as defined as Public Health Service (PHS) in the year 2000 (Wright et al., 2008).
 - In Islamic teaching, virtuous conduct is gained and protected by having strong relation with God; as a result, human beings will be able to convey piety and righteousness in life with sincere faith towards others (Ebrahimi & Yusoff, 2017).

In this presentation to discuss the type and causes of research misconduct and way to overcome it.

3.0 TYPE OF RESEARCH MISCONDUCT

Definition according to National Science Foundation (2020)



Falsification

is manipulating research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented in the research record.

Fabrication

is making up data or results and recording or reported them.

Example of falsification and fabrication case.

Haruko Obokata, 2014, stimulus-triggered acquisition of pluripotency" or STAP treatment.

- Haruko Obokata is a former head of laboratory for Cellular Reprogramming, Riken Center for Development Biology had been found guilty of scientific misconduct by falsified and fabricated data of her research on "stimulus-triggered acquisition of pluripotency" (STAP) treatment. Her research finding has been published by prestige's journal; Nature. However, her papers were questioned and debated in science blog (Paul Knoepfler's and PubPeer) and twitter. They had found the similarity of the photographs in the Nature paper (original) and those found in Obokata's PhD thesis. In addition, no one was able to reproduce the "stimulus-triggered acquisition of pluripotency" or STAP treatment for an acid treatment to turn somatic cells (mouse blood cells) into pluripotent stem cells.
- The investigation has been conducted by Riken foundation where Obakata's work was reexamined properly and resulted both of her paper was withdrawn from Nature in July 2014.

3.3 PLAGIARISM

"can be defined as used other work without citing the owner of papers or articles and claim as own work" (George, 2015).



Picture credit to Kathuria (2016)

As example:

SOURCE

"There is an expiry date on blaming your parents for steering you in the wrong direction. In the moment that you are old enough to take the wheel, the responsibility lies with you".



J.K. Rowling, June 5, 2008 https://news.harvard.edu/gazette/story/2008/06/text-ofi-k-rowling-speech/

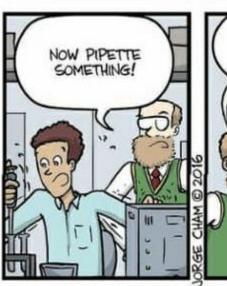
Types	Example
1) Complete plagiarism	There is an expiry date on blaming your parents for steering you in the wrong direction. In the moment that you are old enough to take the wheel, the responsibility lies with you.
2) Change some words	There's an expiration date on blaming your parents for steering you wrong. The moment you're old enough to take the wheel, the responsibility is yours.
3) Your Words	Don't be a whiner. Quit blaming your parents.

4.0 FACTOR OF RESEARCH MISCONDUCT











WWW. PHDCOMICS. COM

(accessed November 28, 2020).

4.1 Poor supervision

Mentor-mentee relationship

- Guide their mentee to achieve research goals.
- Mentor have other responsibility.
- ❖ Difficult to ensure the communication is sufficient.

Emotion

- ❖ Young researchers who under pressure of promotion, publication and funding tend to misconduct (Yu et al., 2020; Kornfeld, 2012).
- ❖ A few of them were helped in emotional support.

4.2 Inadequate Training

Data collection

Lack of training in recording, analyzing, storing and sharing data among the research group.

Hence

Regular meeting is needed to monitor the research performance.



4.3 Personal circumstances

Language skills

✓ Incompetent to read and write all styles and forms of the language pertinent to research needs.

Knowledge and literacy skills

- ✓ Lack of problem solving and synthesis skills.
- ✓ Lack of ability to identify, understand, interpret, create, communicate and compute using printed and written materials associated with varying contexts.

Time management skills

- ✓ Ineffective technique and way to organize, manage and divide their daily time.
- ✓ Fails to determine what needs to be done according to priority.

4.4 Competitive Pressure

- ❖ Based on a research done by Yu et al. (2020), the top three factors for scientific misconduct are individual morality, pressure for promotion and pressure for publishing.
- * Examples of the pressure includes organizational climate, personal and professional pressure, and job insecurities (Davis et al., 2006).
- The interpersonal relationships within the organizations have been identified as one of the important elements to the culture of an organization.
- Though competitions can be good, often time it can lead to misappropriation of research.

5.0 HOW TO OVERCOME

Responsibility

Researchers

Administrative

Researchers

- According to Streefkerk (2020), there are **four methods** that can be taken to **prevent research misconduct**:
- Source tracking and keeping notes organized.
 - Quote and paraphrase.
 - Citation of the original source.

Use plagiarism checkers.

Administrative

- According to Ford (2018) and Horbach et al. (2020).
 - Enforcement of policies that govern academic research.
 - 2 Set standards for supervision for all testing.
 - Enforce expectations for process rigor.
 - Establishing proper reporting procedure.





6.0 CONCLUSION

- Factors of RM are included poor supervision, inadequate training, competitive pressure and personal circumstances.
- This issue needs to be highlighted as it involves the integrity, credibility, and reputation of the researcher among the public.
- To overcome RM, both **researchers** and the **administrative body need to** play a role.

