Scientific Research and Ethics

As we have seen the international guidelines recommend that all researchs institutions continuously support high integrity in their research and make from the 3 below principles the pillars of all phases of research.

1. **Honesty:** To ensure the trustworthiness of research, researchers should be honest when reporting objectives, methods, data, analysis, results, conclusions, etc.

This requires accurate and balanced reporting when:

• presenting and interpreting research

• making claims based on findings

• acknowledging the work of other researchers

• reviewing and evaluating research

2.Transparency To ensure the credibility of scientific reasoning and to ensure that academic reflection is consistent with practice in the relevant field of research, all phases of research should be transparent.

This requires openness when reporting:

• conflicts of interest which is a situation in which financial or other interests have the potential to compromise or bias professional judgement. (Family member should withdraw from Assessors board of research)

• planning of research

• research methods applied

• results and conclusions

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3. Accountability: To ensure the reliability of research, all parties involved should be accountable for the research carried out. This requires that researchers and institutions accept responsibility for the research they are conducting, in terms of:

• accuracy and reliability of research results

• adherence to all relevant regulations

• fostering(encouraging) and maintaining a culture of research integrity through teaching, training, and supervision

• taking appropriate measures when dealing with breaches (violations) of responsible conduct of research

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What can be ethical in scientific research field ?

From ethics definition we should know what is the morally acceptable way to conduct scientific research?

Is there any code of guidelines on how to do so?

We have to define principles and standards that help researchers to preserve the value and standards of knowledge construction.

We should know unethical scientific research ➔ Need to cite some examples

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Unethical scientific research example ?

Jan Hendrik Schön scandal

A German physicist got a PhD from university of Konstanz and was hire by Bell Laboratories after a series of breakthroughs that was later discovered to be fraudulent.

1. He has more than 10 papers published as first author.

2. He received Otto-Klung-Weberbank Prize for Physics in 2001, and Outstanding Young Investigator Award of the Materials Research Society in 2002.

3. Later on many scientists could not replicate the work done by Schön.

4. Some has noticed that an identical graph of data appeared in several different papers.

5. His employer (Bell Lab) started an investigation of his works. Firstly, Schön claimed not to have any logs or notebooks related these works and that he erased all data from his computers.

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6. His published papers were retracted.

7. June 2004 the University of Konstanz was revoked his PHD, he was fired.

8. October 2004 the **DFG**, the German Research Foundation announced that he was banned from working in science für eight years.

There was a similar work of Doctoral thesis in Algeria 2023; the work was stollen from Iraq and published in Algeria, the scandale was over facebook pages.

Unfortunately theses stolen works exist everywhere and all the time!