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Editorial

Transparency, Reproducibility, and Trust: Strengthening the Foundations of Ethical Research

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In the true world of science, the credibility of research depends on the original ideas and ethical conduct. Original work is essential for the development of scientific research. There are three basic rules for ethical research conduct: Transparency, Reproducibility and Trust. In combination, these principles serve as the ethical backbone of research, shaping method and conveying authentic results of research.

Transparency is the first point to conduct the research environment; it involves a clear design on how research will be conducted, analysed and then reported. The Research Transparency Index is an effective tool to detect the clarity and originality of research. This tool is also helpful for reviewers and editors for evaluating the research work [1].

Transparency provides the foundation to check the reliability, which is the most important factor in the reproducibility of any research work. Without reliability, there is a risk of misleading information and wrong perception in the scientific research field. Reproducibility ensures the work is free from methodological errors. It is a critical mechanism that enables the work for further valid and important investigations. Studies that cannot be reproduced can lose their credibility and lose the public confidence in science as well. Reproducibility also increases the cumulative level of knowledge by allowing novel studies to be created based on previous work with confidence. It may also help to create a body of evidence that can guide future research. Encouraging practices such as preregistration of study protocols, sharing of datasets and code, and publishing negative or null results are all essential steps toward improving reproducibility [2].

While trust is always a key factor in research, it builds confidence among researchers to continue or reproduce the original work. Trust in authors and publishers leads to a healthy scientific research ecosystem. Transparency, reproducibility and trust develop confidence between the scientific community and society. These practices demonstrate that science is a collaborative and accountable network that works for humanity. These factors should be considered as a core requirement in scientific research, not as an optional [3].

Ethical publication strategies always consist of the three factors. It is the responsibility of everyone to make sure the involvement of these factors in their roles, whether they are authors, reviewers or publishers. These principles can ensure that knowledge remains reliable, credible, and impactful. These are not simply about improving the quality of publications, also they are preserving the integrity of science itself. In this time when misinformation spreads fast among the public and diminishes confidence in institutions, if we strengthen these ethical foundations, we can ensure that science continues to improve health and drive innovation for the benefit of humanity.

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