

Methodological Abuse

Methodological abuse refers to the **misuse, distortion, or unjustified application** of scientific **methods**, tools, or statistical techniques in a way that **undermines the validity or integrity** of a study.

Common Forms

- Applying a **technique beyond its validated scope** (e.g., using tractography to “map” cranial nerves without resolution to support it).
- Ignoring **fundamental assumptions** of the method (e.g., statistical independence, normality, spatial resolution).
- Selecting or combining methods **to produce desired results** rather than to answer the scientific question.
- Using tools **without appropriate controls or benchmarks**.
- **Over-interpreting exploratory findings** as confirmatory.

Consequences

- Produces **unreliable or misleading conclusions**.
- May **inflate the perceived novelty or impact** of the study.
- Undermines **scientific reproducibility** and **transparency**.
- Contributes to the **erosion of public trust** in scientific findings.

From:

<https://neurosurgerywiki.com/wiki/> - Neurosurgery Wiki

Permanent link:

https://neurosurgerywiki.com/wiki/doku.php?id=methodological_abuse

Last update: **2025/06/15 09:08**

