

Discussion Topic - Case Study: Accuracy of information

Abi is a researcher at an institute and also a statistical programmer. Abi has received a project from a manufacturer to review the nutritional value of a new cereal, Whizzz. Having collected the necessary data, he now needs to perform the appropriate analyses and print the reports for him to send to the manufacturer. Unfortunately, the data Abi has collected seems to refute the claim that Whizzz is nutritious, and, in fact, they may indicate that Whizzz is harmful.

Abi also realises that some other correlations could be performed that would cast Whizzz in a more favourable light. "After all," he thinks, "I can use statistics to support either side of any issue."

Ethical Concerns

- Clearly, if Abi changed data values in this study he would be acting unethically. But is it any more ethical for him to suggest analysing correct data in a way that supports two or more different conclusions?
- Is Abi obligated to present both the positive and the negative analyses?
- Is Abi responsible for the use to which others put his program results?
- If Abi does put forward both sets of results to the manufacturer, he suspects that they will publicise only the positive ones. What other courses of action has he?

You should also highlight legal, social and professional impacts of any choices made. Please note that there are no right or wrong answers here and you may introduce local, as well as international, legislature in your responses.

Initial Post

As a statistical programmer and researcher, Abi must adhere to strict ethical guidelines to maintain the integrity of his profession and the trustworthiness of the data analysis process, as Sempa et al. (2024) emphasised.

One of Abi's most significant ethical concerns is the potential harm of selectively presenting data. Even if Abi does not falsify data, highlighting only positive outcomes can be misleading and equally unethical, as noted by Correia (2023). The fundamental principles of respect, honesty, fairness, care, and justice in research mandate that Abi presents a complete and accurate picture of his findings (Craig, 2022).

Thus, Abi must present both the positive and negative analyses, aligning with the ethical requirement of providing a comprehensive overview of the research findings. This is not just a professional obligation but a necessity to ensure stakeholders are fully informed of all potential outcomes, as highlighted by Kujala et al. (2022) and the fundamental principle of the British Computer Society (2022).

While Abi cannot control how others ultimately use the results, he does bear some responsibility for ensuring that his report is clear, comprehensive, and transparent (Bos, 2020).

As the British Educational Research Association (2019) emphasises, the best action to address a potential manufacturer's publicising only the positive ones is for Abi to include disclaimers or recommendations for further independent testing to mitigate potential misuse. This would demonstrate due diligence and an ethical commitment to public safety.

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