

## Summary Post, 20 August 2023

Abi's situation serves as a classic ethical dilemma encountered in research: the challenge of handling data analysis and presentation when differing methods yield conflicting outcomes. Unethical manipulation of data to align with a preferred conclusion compromises research integrity (Resnik, 2014). Similarly, presenting selective analyses or results to endorse a biased perspective is also considered unethical (Fanelli, 2009). Abi's ethical responsibility entails disclosing both positive and negative analyses to the manufacturer, promoting transparency and clarifying assumptions, limitations, and methodologies for each (Smith & Williams-Jones, 2012).

Analyzing valid data using methods that can support divergent conclusions is not inherently unethical, as long as scientifically sound methodologies are applied. However, intentionally favoring one approach over another to influence results crosses ethical boundaries. To ethically address this scenario, a comprehensive report encompassing all analyses should be presented, discouraging the manufacturer from cherry-picking favorable results (Nosek & Bar-Anan, 2012). Furthermore, seeking input from colleagues or experts can validate findings and reinforce unbiased reporting (Steneck, 2006).

Should the manufacturer reject publishing both sets of results, Abi could contemplate independent publication in a reputable scientific journal (Shamoo, 2009). Effective communication with the manufacturer is pivotal, stressing the significance of encompassing all data and the risks associated with selective reporting (Martinson et al., 2005). Abi should also adhere to ethical protocols, such as anonymizing sensitive

data, GDPR compliance, obtaining participant consent, and consulting experts, as recommended by User Research Community (2018) and National Academies (2009).

Unethical conduct carries substantial ethical, legal, social, and professional ramifications. Data manipulation erodes public trust in research and taints the reputation of researchers and institutions (Bouter, 2023). Legally, it may infringe upon laws against false advertising or misrepresentation. Socially, selective reporting can misguide the public and impact consumer decisions. A recent study by Soehartono et al. (2022) underlines that disregarding integrity and ethical principles could result in severe consequences, potentially eroding public trust in research.

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