

## **RMPP22 Collaborative Discussion 2**

### **Initial Post**

Statisticians, like most occupations, are bound by a set of ethical guidelines. The first step to analysing the data would be to remain objective. This does not mean that the researcher should adopt a blank mind, but rather that the researcher should seek to interrogate their findings with increased scrutiny, regardless of what the outcome may be (Ellenberg, 1983). While it may be true that statistics may be used to support either side of the issue, the researcher should pay attention to the appropriate methodology, confidence intervals and associated p-values (Gelfond *et al.*, 2011).

It is not ethical for Abi to suggest analysing the data in a way that supports different conclusions, as this would be ultimately the same as misleading the consumer and answering the question in a way that promotes the product. The ethical obligation that Abi has is to utilize the appropriate methodology for the case and present the facts as discovered (Resnik David, 2020).

I do not believe that Abi has an obligation to present both analyses, as this would allow the company to select the positive analysis for publication thus misleading the consumer. Whizz is a consumer product, which is either nutritious or not, judging by the data provided. If Abi arrives at a negative conclusion, he is obligated to send those results to the company, who may decide to alter the formulation of the cereal to increase its nutrition. This course of action would ultimately benefit both the consumer and company, and Abi would have acted ethically (Panter and Sterba, 2011).

It is highly unlikely that the outcome of a nutrition study would be obscured. The data would either show a positive or negative effect if the researcher has used the correct methodology. The researcher has the ethical responsibility to send the correct results to the company, based on appropriate methodology and statistical analysis. Therefore, only the negative results will need to be sent in the case study depicted.

Ellenberg, J. H. (1983) 'Ethical guidelines for statistical practice: A historical perspective', *American Statistician*, 37(1), pp. 1–4. doi: 10.1080/00031305.1983.10483062.

Gelfond, J. A. L. *et al.* (2011) 'Principles for the ethical analysis of clinical and translational research.', *Statistics in medicine*, 30(23), pp. 2785–2792. doi: 10.1002/sim.4282.

Panter, A. T. and Sterba, S. K. (2011) *Handbook of Ethics in Quantitative Methodology*. Taylor & Francis (Multivariate Applications Series). Available at: <https://books.google.co.za/books?id=6P3FBQAAQBAJ>.

Resnik David (2020) *What Is Ethics in Research & Why Is It Important?* Available at: National Institute of Environmental Health Sciences. (2018). What Is Ethics in Research & Why Is It Important? - by David B. Resnik, J.D., Ph.D. [online] Available at: <https://www.niehs.nih.gov/research/resources/bioethics/whatis/index.cfm> %0A%0A (Accessed: 30 April 2022).

## **Peer response 1**

Hi Kieron, thank you for your post which was very informative

While I disagree that Abi is obligated to provide both positive and negative results, I completely agree with you that negative results should never be omitted from the report. As you correctly mentioned, this may result in litigation against Abi directly for false reporting (OECD, 2007).

Your comment on whistleblowing is interesting and I was motivated to research the topic further. Whistleblowers typically experience negative consequences, such as mistrust by coworkers and being framed as a traitor. 75% of whistleblowers feel stigmatized and experience health problems or job loss (Bouter and Hendrix, 2017). An analysis of 124 actioned whistleblower cases resulted in a mere 30 cases of success. The remaining cases, were either unresolved- 36 cases, or resulted in failure- 58 cases (Vie, 2020).

From these statistics, it is clear that more protection needs to be afforded to whistleblowers, including incentives, job and income protection. Additionally, more public information needs to be given to change the narrative of whistleblowing, from traitor to hero (West and Bowman, 2020).

Bouter, L. M. and Hendrix, S. (2017) 'Both Whistleblowers and the Scientists They Accuse Are Vulnerable and Deserve Protection', *Accountability in Research*. Taylor & Francis, 24(6), pp. 359–366. doi: 10.1080/08989621.2017.1327814.

OECD (2007) 'Best Practices for Ensuring Scientific Integrity and Preventing Misconduct', *Organisation for Economic Co-Operation and Development Global Science Forum*, pp. 1–13. Available at: [www.oecd.org/sti/gsf](http://www.oecd.org/sti/gsf).

Vie, K. J. (2020) 'How should researchers cope with the ethical demands of discovering research misconduct? Going beyond reporting and whistleblowing', *Life Sciences, Society and Policy*. Life Sciences, Society and Policy, 16(1), pp. 1–18. doi: 10.1186/s40504-020-00102-6.

West, J. P. and Bowman, J. S. (2020) 'Whistleblowing Policies in American States: A Nationwide Analysis', *American Review of Public Administration*, 50(2), pp. 119–132. doi: 10.1177/0275074019885629.

## **Peer response 2**

Hi Kike, I found your post interesting, especially your conclusion. I completely agree with you regards to only publishing the negative results. I feel that the ambiguity may arrive from the wording in the case study.

Abi initially conducts the “appropriate analysis” and arrives at a negative conclusion. He then investigates “some other correlations” which would yield a positive result. From my understanding, this means that he has initially done the correct analysis and later looks for other calculations to arrive at a positive result. Therefore, he’s secondary analysis is predicated on the negative results from the first analysis, meaning these secondary calculations would not have been done had he arrived at a positive result in the initial calculation.

From this line of thought, I feel as if Abi would act unethically if he were to publish both sets of results, considering he only performed the secondary analysis to arrive at a positive outcome to appease his employers.

Your quotation from the ASA guidelines is apt - “Use methodology and data that are valid, relevant, and appropriate, without favouritism or prejudice, and in a manner intended to produce valid, interpretable, and reproducible results”(ASA, 2022)

Abi has acted with prejudice by conducting an inappropriate analysis to favour the company producing whizz(ASA, 2022).

ASA (2022) *Ethical Guidelines for Statistical Practice*. Available at: <https://www.amstat.org/your-career/ethical-guidelines-for-statistical-practice#:~:text=The ethical statistical practitioner seeks,other results of statistical practices> (Accessed: 2 May 2022).

## **Summary Post**

Over the course of the module, my colleagues and I have discussed Abi's ethical dilemma with regards to performing multiple analyses and sending the subsequent report to the company. I have reached the conclusion that my initial assessment that Abi should not perform additional analyses to portray the product in a more positive light, to be correct.

All of my colleagues agree that Abi should not manipulate the data, as this would be unethical. The APA proposes an interesting guideline to ethical research, one of which is "to tap into ethics resources" (Smith, 2022). This means to consult readily available ethical guidelines from multiple sources whenever encountering a potential ethical issue.

Kieran raised an interesting point, that it would be up to the manufacturer to ensure that Abi's research was presented in an ethical manner, and this would be enforced by the related regulatory agencies (Holmes, 2022).

Specific research ethics concerning this case would be relating to data analysis in which the researcher should disclose all potential biases, describe the methods and rationale for the analysis and report the data in a factual and unbiased manner (Wester, 2011).

Smith, D. (2022). Five principles for research ethics. [online] <https://www.apa.org>. Available at: <https://www.apa.org/monitor/jan03/principles> [Accessed 6 May 2022].

Holmes, K. (2022). RMPP\_PCOM7E March 2022 A: Initial Post. [online] Available at: <https://www.my-course.co.uk/mod/hsuforum/discuss.php?d=306320> [Accessed 6 May 2022].

Wester, K. (2011) 'Publishing ethical research: A step-by-step overview', *Journal of Counseling and Development*, 89(3), pp. 301–307. doi: 10.1002/j.1556-6678.2011.tb00093.x.