**Case Study: Accuracy of information**

**Collaborative Learning Discussion 2**

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**(Unit 8 Research Methods and Professional Practice May 2023)**

**The task:**

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.

**Summary post**

Despite the task lacking many details (such as the country where Abi conducted the research, information on the contract between the manufacturer and the research institute, how the test was administered, and the specific "harm" revealed), we have had a meaningful discussion.

Most fellow students emphasised that altering data is highly unprofessional and unethical behaviour, with the potential to harm public health. This could lead to fines and legal repercussions for the individuals involved (Adelakun, 2023). I agree that researchers must maintain objectivity and honesty in their studies.

Simultaneously, Linhoff (2023) suggested that Abi should clearly present both positive and negative analysis results in the report. However, there is a risk that the manufacturer will focus solely on the positive aspects and disregard the negative outcomes. Kyriacou (2023) proposed that manufacturers should be warned about the legal, social, and professional consequences of distorting outcomes. While this suggestion is reasonable, I believe it is not sufficient. In my opinion, in cases like this, the entire research design should be structured to prevent favouring a particular outcome, establishing clear understandings between the client and the researcher (Katan, 2007).

According to the recommendations of the U.S. Federal Trade Commission, at least two double-blind, randomised control trials should be conducted before promoting a particular product (Ruckers, 2016).

However, even though there is no perfect research method, in Abi's case, conducting further analysis is necessary to obtain clinical results for the product. For example, as suggested by Weaver and Miller (2017), a case study design could incorporate factors such as the tested nutrient or dietary pattern, background status, delivery of the test diet or supplement, and so on.

Additionally, I would recommend utilising the Approach to Ethical Decision-Making outlined in the Code of Ethics for the Nutrition and Dietetics Profession. It provides guidance for identifying potential ethical dilemmas and developing strategies to prevent future issues. For instance, in our case, Abi could have made better decisions by asking themselves questions based on the main principles of the Code of Ethics, such as professional development, integrity in personal and organisational behaviour, and social responsibility for well-being.

In conclusion, I concur that we should always prioritise the collective good and eliminate self-serving behaviours that disregard the potential adverse consequences for the public (Kyriacou, 2023).

#### **Initial post: Evidence is in the details**

I'm a little confused about an option in the task that states, "There are no right or wrong answers here." I suppose all sides—consumers, manufacturers, and researchers—will not be satisfied when the potentially harmful product eventually reaches the market. It carries huge risks for the manufacturer, research institution reputation, and regulators. So, *fortunately*, the data Abi has collected seems to be questionable. According to Katan (2007), ethical research implies publishing the results, whether they are favorable or not to the client, and providing full disclosures for all participants.

Moreover, I think the task missed a lot of valuable detailed input to be a good judge. In what country did Abi conduct the research? What does the contract between the two sides (manufacturer and researcher) say? How many rounds of tests were provided? In what exact way could the new cereal be harmful and for whom? For example, many people believe that any amount of sugar is very harmful, but it is not true for everyone.

According to the recommendations of the U.S. Federal Trade Commission, before promoting a particular product, at least two double-blind, randomized control trials should be conducted. (Ruckers, 2016).

For future researchers, I recommend using the table from Code of Ethics for the Nutrition and Dietetics Profession below to better focus on the source of ethical problems.

**Peer response 1**

I absolutely agree with the main message of Nils Linhoff’s initial post – researchers must be objective and honest in their studies. Changing data values would be unethical and contrary to the laws of many countries (Linhoff, 2023).

Ruckers (2016) highlighted this specific problem in producing in the food industry. According to the paper, when manufactures fund nutritional studies, especially for marketing purposes, there is often an expectation of favorable results. However, such expectations should raise ethical concerns.

Another scholar provided some suggestions for ethical vigilance, including designing the research to avoid favoring a particular outcome, establishing clear understandings between the client and the researcher, and publishing results regardless of their favorability (Katan, 2007).

Moreover, if a statistician were to manipulate data to support a specific conclusion, it could be considered scientific misconduct and may result in disciplinary action by their employer or professional organisation. Researchers should adhere to the Code of Ethics for the Nutrition and Dietetics Profession and the other rules.

**Peer response 2**

It's difficult to add anything to Constantinos's (Kyriacou, 2023) comprehensive comment, but I will try.

From my perspective, the most controversial detail in the Abi case is the possibility of a new product being “harmful”. Of course, the researcher must show the results to the manufacturer, whatever they may be, and after that, theoretically, there should be an option for a second analysis with more detailed clinical nutrition research. According to Weaver and Miller (2017), this case study design includes factors such as:

- Test nutrient or dietary pattern,

- Background status,

- Delivery of test diet or supplement,

- Controls,

- Length of study,

- Blinding,

- Study population.

For example, considering these factors, the researchers must answer to the questions like:

- Are other nutrients being displaced, and will this confound interpretation of the study?

- Is there an ethical and meaningful comparator?

- Is the priority to study the population likely to benefit from the product or to achieve generalizable results?

Researchers emphasised that each approach has its strengths and weakness, and no single method is perfect in nutrition research.

**Peer response 3**

Despite the answer to Abi's case appearing obvious - it is unacceptable to falsify research results, even if they are unfavourable to the product manufacturer - I must emphasise that in the real world, we navigate a complex web of details and conditions.

I agree with the notion that altering data is highly unprofessional and unethical behaviour, with the potential to cause harm to public health. Furthermore, such actions can result in fines and legal consequences for those involved (Adelakun, 2023). Considering the aforementioned points, we can approach the case from two perspectives.

Firstly, it is crucial to cultivate "moral laws" within ourselves, particularly among scholars (Kant, 2005). According to Weaver (2006), virtues have mostly been described as fixed characteristics inherent to human beings. However, virtue theories are flexible and can be developed. Human beings are responsible for promoting moral principles to enhance their relevance and usefulness for humanity.

Thus, researchers must uphold objectivity and integrity in their studies, adhering to the principles outlined in codes of ethics. Take, for instance, the Australian Code for the Responsible Conduct of Research, which highlights fundamental principles such as honesty, integrity, respect for participants, and responsible communication of research results (Nowson, 2010).

On the flip side, we must acknowledge that some researchers may be tempted to disregard ethical norms for some personal reasons. Rucker & Rucker (2016) suggest that manufacturers often fund nutritional studies for marketing purposes, with an expectation of favourable outcomes, which may not always be the case. This underscores the need for regulations and penalties to deter researchers from disregarding ethical principles.

In this context I highly appreciate you mentioned the Civil Rights Act. We should ensure compliance with relevant laws and regulations, which may involve obtaining and maintaining a state license or certification when practicing within the scope of nutrition and dietetics statutes and fines for the violations. Failure to comply may result in fines for any violations.

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