

Review of: "Knowledge of Risk Associated with Exposure to Per- and Polyfluoroalkyl Substances in Abuja, Nigeria v1"

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Potential competing interests: No potential competing interests to declare.

Knowledge of Risk Associated with Exposure to Per- and Polyfluoroalkyl Substances in Abuja, Nigeria

Summary of study

This paper investigates the knowledge and risk of Per- and Polyfluoroalkyl Substances (PFAS) in Abuja, Nigeria. PFAS are synthetic chemicals that are persistent, bioaccumulative, and toxic to humans and the environment. They are used in various industrial and consumer products, but some are being phased out in developed countries. A survey of 365 randomly selected residents revealed that 91% were unaware of PFAS and their health effects, while 9% had some knowledge. This suggests that PFAS exposure in Abuja may pose a global threat. The paper recommends extensive research and awareness campaigns on PFAS and collaboration with industrialized nations for sustainability.

Corrections

Apart from grammatical errors, a few corrections must be made.

Introduction

Reasonably well written, but the problem statement could be improved:

"Despite the widespread use and potential toxicity of PFAS, there is a lack of awareness and knowledge about these chemicals among the general public in Abuja, Nigeria. This poses a severe health and environmental risk, as people may unknowingly expose themselves and others to PFAS through contaminated food, water, and consumer products. Moreover, there is a gap in the literature on the levels and sources of PFAS in Abuja, as well as the attitudes and behaviours of the residents towards these chemicals".

The objective

I think the objective you have written is pretty straightforward and well-stated. You have specified what you want to assess (the knowledge and risk perception of PFAS), who you want to assess it among (the residents of Abuja), and how you want to assess it (by identifying the main factors influencing their exposure and prevention practices). You have also shown how your objective relates to your research question and the existing gap in the literature. However, you could improve your objective by making it more measurable. For example, you could indicate how you will measure the knowledge and risk perception of PFAS, such as using a survey or a questionnaire. Consider: "To measure the knowledge and risk perception of PFAS among the residents of Abuja using a self-administered questionnaire and to identify the main factors influencing their exposure and prevention practices."

Materials and Methods

The materials and methods section should describe how you conducted your study in enough detail so that other researchers can replicate your results. You could improve by adding some more information and clarity.

- Explain why you chose Abuja as your study area. How does it relate to your research problem and question?
- Provide demographic information about your sample, such as age, gender, education, occupation, etc. How representative is your sample of the general population of Abuja?
- Describe how you designed your questionnaire. What questions did you ask? How did you measure the knowledge and risk perception of PFAS? How did you ensure the validity and reliability of your questionnaire?
- Explain how you distributed and collected your questionnaires. Did you use online or offline methods? How did you recruit your participants? How did you ensure the ethical conduct of your research?
- Describe how you analyzed your data. Why did you use percentages? What statistical tests did you perform? How did you interpret your results?

Results

This section was not adequately presented. Under results, you have presented the trends: What variables are increasing or decreasing, are those significant, etc?

Discussion

- Provide a clear summary of your key findings at the beginning of the section. You should restate your research problem, question, and objectives and briefly recap your main results and how they answer your question. You should not just repeat the data from your results section but highlight your study's most relevant and significant outcomes.
- Interpret your results regarding other authors' findings, thus showing how they relate to the existing literature and theory. You should explain your results, how they fit or differ from previous studies, and what new insights or contributions they offer to your field of knowledge. You should also cite relevant sources to support your interpretations and comparisons.
- Discuss the implications of your results for knowledge and practice. You should show why your results matter, how they address the research gap or problem you identified, and how they can be applied or used in real-world situations. You should also consider your study's ethical, social, environmental, or policy implications, if applicable.
- Acknowledge the limitations of your study and how they affect the validity and generalizability of your findings. You should be honest and transparent about the weaknesses or shortcomings of your research design, methods, data, or analysis and how they may have influenced your results or conclusions. You should also suggest ways to overcome or minimize these limitations in future research.

Conclusion

I don't know whether it is the practice of the journal, but the conclusion wasn't clear-cut. I usually define conclusion as the applications or the implications of the observations made based on the objectives you set for the project.

Recommendation

This section provides practical suggestions based on your research findings and conclusions. Here are some suggestions on how to improve your recommendation section:

- Prioritize and categorize your recommendations. You should rank your recommendations according to their

importance and feasibility and group them into categories or themes, such as policy, practice, research, or education. You should also indicate your recommendations' target audience or stakeholders, such as governments, agencies, NGOs, researchers, or practitioners.

- Provide specific and actionable recommendations. You should use clear and concise language and avoid vague or general statements. You should also use action verbs to indicate what needs to be done, by whom, and how. You should also provide evidence or rationale to support your recommendations and show how they can address the research problem or gap.
- Discuss the implications and challenges of your recommendations. You should show your recommendations' potential benefits and impacts and the possible risks and barriers to their implementation. You should also suggest ways to overcome or minimize these challenges and indicate the expected outcomes or indicators of success.