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| Journal Name: | **[Archives of Current Research International](https://journalacri.com/index.php/ACRI)** |
| Manuscript Number: | **Ms\_ACRI\_139345** |
| Title of the Manuscript: | **MONITORING OF FLUORIDE CONTENT IN WATER SUPPLIED FOR HUMAN CONSUMPTION IN MUNICIPALITIES IN CEARÁ: SPATIAL ANALYSIS FOR 2024** |
| Type of the Article | **Original Research Article** |

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| PART 1: Comments | | |
|  | Reviewer’s comment **Artificial Intelligence (AI) generated or assisted review comments are strictly prohibited during peer review.** | Author’s Feedback *(It is mandatory that authors should write his/her feedback here)* |
| **Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.** | This publication highlights notable regional differences in water fluoride and offers crucial insights into the geographical distribution of fluoride levels in drinking water in Ceará, Brazil. In order to ensure optimal fluoride concentrations—which are crucial for preventing dental caries, an important public health concern—better surveillance and legislative actions are urgently needed. The work makes a significant contribution to oral health and environmental health research since it uses spatial autocorrelation analysis, a strong analytical approach that helps direct focused public health initiatives. For academics and politicians tackling health disparities in underprivileged areas, its conclusions are especially significant. | Thanks. |
| **Is the title of the article suitable?**  **(If not please suggest an alternative title)** | The title is suitable as it clearly conveys the study's focus on fluoride content monitoring, spatial analysis, and the specific context of Ceará in 2024. However, it could be slightly refined for conciseness and clarity.  Suggested Alternative Title: "Spatial Analysis of Fluoride Levels in Drinking Water Across Ceará Municipalities, 2024" | Dear editor, I agree with your suggestion and will follow it. Thank you. |
| Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here. | The abstract is mostly comprehensive, summarizing the aims, methodology, results, and conclusions effectively. However, it could be improved by briefly mentioning the public health implications of the findings (e.g., risks of dental caries or fluorosis) to emphasize the study's relevance. Additionally, the phrase "less than 3% of municipalities have acceptable fluoride levels" could be clarified by specifying the ideal range (0.6–0.8 mg/l). Deleting the mention of "zero values" in eleven municipalities might streamline the abstract, as this detail is less critical and can be reserved for the results section. | Dear reviewer, all requests have been accepted and corrected. |
| Is the manuscript scientifically, correct? Please write here. | The manuscript appears scientifically sound, employing an ecological study design with robust spatial autocorrelation analysis (Global Moran Index and LISA) to evaluate fluoride levels. The methodology aligns with standard practices for spatial epidemiology, and the results are consistent with the data presented. However, the claim that only 2.17% of municipalities (4 out of 184) have ideal fluoride levels in 2024 seems inconsistent with the statement that 5% have acceptable levels in the discussion; this discrepancy needs clarification. Additionally, the interpretation of the Moran Index (I = 0.483) as indicating "moderate" spatial correlation is appropriate, but the manuscript could benefit from a brief explanation of why certain municipalities reported zero fluoride levels. | Dear reviewer, all requests have been accepted and corrected. |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.** | The references are generally sufficient, covering key aspects of water fluoridation, oral health, and spatial analysis, with a mix of Brazilian and international sources. | Thanks. |
| Is the language/English quality of the article suitable for scholarly communications? | The English quality is generally acceptable | Thanks. |
| Optional/General comments |  |  |

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| **PART 2:** | | |
|  | **Reviewer’s comment** | **Author’s Feedback** (It is mandatory that authors should write his/her feedback here) |
| **Are there ethical issues in this manuscript?** | *(If yes, Kindly please write down the ethical issues here in details)* | There are no ethical issues |