

## Peer Review

# Review of: "The Influence of Glycemic Status and Sociodemographic Factors on Patients' Dental Caries Risk and Experience in Lagos, Nigeria"

Ana Coelho<sup>1</sup>

1. University of Coimbra, Coimbra, Portugal

This manuscript addresses a relevant and underexplored topic: the association between glycemic status and caries risk in a Nigerian adult population. The study is well-intentioned, and the inclusion of both diabetics and non-diabetics allows for useful comparisons. However, several issues need to be addressed to ensure analytical transparency, interpretative accuracy, and clinical relevance.

Although diabetic participants showed a descriptively higher prevalence of caries risk and experience, the adjusted odds ratio was not statistically significant. Despite this, the discussion repeatedly implies a direct link between diabetes and caries, which is not supported by the adjusted model. The authors must moderate their conclusions, clearly stating that no independent association was observed after adjusting for confounders.

The classification into low, moderate, and high caries risk appears to be based on a combination of clinical indicators (DMFT, plaque index, salivary flow) and behavioral factors. However, the thresholds for classification are not referenced or justified with validated tools. The authors should provide a clear reference or rationale for the cut-off values used to define caries risk categories. If the method was adapted from a known protocol (e.g., ADA, CAMBRA), it should be cited accordingly.

Diabetic participants were significantly older, had lower income and education levels, and were more likely to be female. These variables are known to influence oral health and could confound the association with glycemic status. The authors appropriately adjusted for some confounders, but the extent to which these adjustments account for group imbalance is not fully explored. The interpretation

of adjusted results should be expanded, and an explicit discussion on how sociodemographic differences may have diluted or obscured true associations should be included.

The study refers to caries progression, but it is unclear how many individuals developed new carious lesions or how these changes differed by group or caries risk level. How was progression evaluated, given that patients appear to have been assessed only once?

The manuscript is generally well-written but could benefit from language editing to improve clarity and fluency. Some sections (especially in the discussion) are repetitive and would benefit from reorganization.

“Good,” “fair,” and “poor” oral hygiene categorization should be clarified—are these based solely on plaque index thresholds?

Consistency in the use of percentages with or without n values should be checked.

## **Declarations**

**Potential competing interests:** No potential competing interests to declare.