

Responses to Reviewer 2s' Comments

1. Summary

Dear reviewer, thank you very much for taking the time to review this manuscript. Please find detailed responses below and the corresponding revisions/corrections highlighted/in track changes in the re-submitted files.

2. Questions for General Evaluation	Reviewer's Evaluation	Response and Revisions
Does the introduction provide sufficient background and include all relevant references?	Can be improved	We have made the corrections suggested by the reviewer and hope that the introduction now meets the required quality standards.
Is the research design appropriate?	Yes	
Are the methods adequately described?	Can be improved	We have made the corrections suggested by the reviewer and hope that the methods now meet the required quality standards.
Are the results clearly presented?	Yes	
Are the conclusions supported by the results?	Yes	
Are all figures and tables clear and well-presented?	Yes	

3. Point-by-point response to Comments and Suggestions for Authors

Comment 1: Title: Lines 2-3: "Individual Factors Are More Important than Contextual Factors for Protection from Dental Caries" I think the title is too categorical. Your results show an association between individual and contextual factors, not direct causation. I suggest changing the title to "Association of Individual and Contextual Factors for Protection from Dental Caries..." or something similar.

Response 1: Thank you for pointing this out. We agreed and changed the title.
Page 1, Lines 2-3 "*Association of Individual and Contextual Factors for Protection from Dental Caries*"

Comment 2: Introduction: Please specify why 5-year-old children were chosen in your study. Does this relate to the transition from primary to permanent dentition?

Response 2: Dear reviewer, assessing dental caries at this age is important because it corresponds to the index age for primary dentition recommended by the World Health Organization and reflects early exposure to biological and contextual determinants, serving as a predictor of health inequalities and guiding public health actions Accordingly, we revised the text and emphasized this point, considering the importance of this index age. "Assessing dental caries at this age is important because it corresponds to the index age for primary dentition recommended by the World

Health Organization and reflects early exposure to biological and contextual determinants, serving as a predictor of health inequalities and guiding public health actions [7].” (Introduction, 1st paragraph, Page 2, Lines 63-66).

Materials and methods

Comment 3: Lines 114, 117, 120: The Minas Gerais Oral Health Survey was conducted in 2012 and included a sample of 1193 five-year-old children, with representativeness on the state level in three different domains: the state capital and two groups of municipalities denominated Interior I and Interior II [8]. For the capital, the data were extracted from the 2010 National Oral Health Survey conducted two years earlier. For the 60 municipalities from Interior I and II, the representative sample was based on the mean number of decayed, missing and filled primary teeth (dmft) according to data from the 2010 National Oral Health Survey for the 120 southeast region of the country [8].” The data were collected in 2010 and 2012. That is a limitation of the study. The discussion should justify the relevance of 14/16-year-old data. Has there been a progress in the Brazilian healthcare system during that period?

Response 3: Dear reviewer, we acknowledge that the data were collected in 2010 and 2012, which represents a limitation of the study. However, these data remain highly relevant, as they derive from the only epidemiological survey representative of the entire state of Minas Gerais. Since then, there has been no other research with a similar scope. These population data are important for understanding the distribution of dental caries and associated factors, as well as for supporting the planning and decision-making of oral health policies in the region. Furthermore, it is worth noting that few structural changes have occurred in public oral health care since then; in fact, the policy and guidelines adopted in the country date back to 2006, prior to this survey. We have added a sentence in the Discussion acknowledging the age of the data as a limitation and emphasizing the relevance of these findings for understanding inequalities in oral health. “In addition, the data were collected in 2010 and 2012. Nevertheless, these data remain relevant, as they originate from the only population-based oral health survey representative of the entire state of Minas Gerais, providing important evidence for understanding inequalities in oral health.” (Discussion, 12th paragraph, Page 9, Lines 352-356).

Comment 4: Furthermore, I believe that what is meant by material good should be explained in more detail.

Response 4: Material goods refer to household durable consumer items owned by the family, used as an indirect indicator of socioeconomic status. In the SB Minas survey, this variable was measured through the number of goods present in the household, including items such as televisions, refrigerators, sound systems,

microwave ovens, washing machines, cars and portable electronic devices (e.g., laptops and mobile phones). The total number of these items is used to characterize household living conditions and economic resources. "Material goods refer to household durable consumer items owned by the family, used as an indirect indicator of socioeconomic status. In the SB Minas survey, this variable was measured through the number of goods present in the household, including items such as televisions, refrigerators, sound systems, microwave ovens, washing machines, cars and portable electronic devices (e.g., laptops and mobile phones). The total number of these items are used to characterize household living conditions and economic resources." (Materials and Methods, 6th paragraph, Page 4, Lines 153-159).

Comment 5: Discussion: Lines 208-212: "The present results are in agreement with data in the literature demonstrating that context is not as much of a determinant of caries as individual socioeconomic factors. While some studies have reported the influence of contextual factors on oral health [30–34], these factors seem not to be addressed in such a way as to strengthen possible protective factors against the occurrence of dental caries in children [35,36]." In this section it is necessary to add a deeper critical review of the selected variables. Were the wrong contextual variables examined? The dietary habits, the level of fluoride in water and brushing teeth with fluoride toothpaste are not mentioned, and they are the most important to the etiology of caries.

Response 5: Dear reviewer, we agree that including variables such as dietary habits, fluoride concentration in water, and toothbrushing with fluoride toothpaste are important determinants. However, these variables were not collected in the SB Minas survey and were therefore not available in the database used in this study. We included in the analysis all variables available in the SB Minas dataset that were consistent with the conceptual model of dental caries in children. We have also added a sentence in the Discussion acknowledging this limitation. "Another limitation regards the absence of variables such as dietary habits and oral hygiene measures in the SB Minas database and the lack of sufficient information in the databases for some variables, which hindered a more global understanding of the effect of access to dental care on the prevention of caries." (Discussion, 12th paragraph, Page 9, Lines 356-357).

4. Response to Comments on the Quality of English Language

Point 1: The English is fine and does not require any improvement.