

Review of: "Carriage of oropharyngeal bacteria among children in a vulnerable rural population living in a tropical region in São Paulo, Brazil"

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Potential competing interests: The study by Magnoler et al, Focused on assessing oropharyngeal carriage of *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Moraxella catarrhalis* in rural São Paulo children, this study utilized multiplex PCR techniques. Results showed high colonization rates for *S. pneumoniae* and *M. catarrhalis*, attributed to Brazil's immunization program, with *H. influenzae* not detected. The study revealed socioeconomic vulnerability among participants and identified associations between *S. pneumoniae* carriage and demographic factors such as gender and ethnicity. These findings provide insights into respiratory pathogen prevalence and risk factors in rural communities, impacting health strategies beyond Brazil. Major Concern: 1. Clarify the linkage between respiratory infections and the mentioned pathogens: Specify that *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Moraxella catarrhalis* are among the primary pathogens causing respiratory infections globally. Emphasize the importance of the study: Highlight the significance of investigating respiratory infections in rural settlements in Brazil, especially considering the scarcity of research in this area. Provide additional context on the *H. influenzae* vaccine and its relevance to the study: Offer a brief explanation of the vaccine's inclusion in Brazil's National Program of Immunization and its implications for the study's findings. 2. Provide a more cohesive transition between the general discussion of respiratory infections and the specific focus on rural settlements in Brazil: Consider introducing the context of rural health challenges earlier in the paragraph to maintain coherence. Ensure clarity and precision in presenting statistical data: Specify the source of statistics and ensure accuracy in numbers and percentages mentioned. Streamline the language for clarity and conciseness: Simplify complex sentences and avoid redundant phrases to enhance readability. Correct typographical errors and inconsistencies: Ensure consistency in the formatting and referencing of sources, such as the inclusion of the abbreviation "IBGE" and the year "2022." Provide clearer transitions between different geographical locations and their relevance to the study: Ensure smooth transitions between discussing São Paulo state, the Pontal of Paranapanema region, Mirante of Paranapanema, and the rural settlements. Clarify and streamline the introduction of statistical data: Instead of providing the specific population numbers for São Paulo state and its municipalities, consider focusing on key points such as its significance as the richest and most populous state in Brazil. Specify the rationale for participant selection and sample size: Clarify the rationale behind selecting individuals under 18 years old and the reasons for the specific number of participants included in the study. Improve clarity and conciseness in describing the questionnaire and data collection process: Streamline the description of the questionnaire interview process and provide concise explanations for each demographic and clinical characteristic collected. Ensure clarity in the exclusion criteria: Specify the reasons for excluding participants who received antibiotic treatment within 72 hours of sample collection. Minor Concern: 1. Clarify Normality Assessment: Instead of mentioning "for normally distributed variables," consider briefly explaining how normality was assessed. This could involve mentioning the specific method used (e.g., Shapiro-Wilk test) or stating that normality was visually assessed through histograms or QQ plots. 2. Specify Test Assumptions: Provide a brief explanation of the assumptions underlying the chi-squared test and the t-test. This could involve mentioning assumptions such as independence of observations, equal variances, and normally distributed residuals for the t-test. 3. Ensure Clarity in Reporting Results: Specify whether statistical significance was determined based on two-tailed or one-tailed tests, as this can affect interpretation. 4. Elaborate on Logistic Regression Analysis: Provide a brief rationale for using logistic regression to examine potential risk factors for carriage. Additionally, mention any covariates included in the analysis. 5. Provide Version Information for Software: Specify the versions of GraphPad Software and Sigma-Stat program used for statistical analysis to enhance reproducibility.

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