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THE IMPACT OF MOUTH BREATHING ON THE ARTICULATION OF /S/ AND /Z/ SOUNDS IN 4–6 YEAR-OLD CHILDREN

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SHORT INTRODUCTION

Breathing is a priority function in life and is normally made through the nose. In typical development nasal breathing constitutes the physiological norm in children. Mouth breathing impacts around 10–15% of all children, however the prevalence varies depending on the region. Mouth breathing results in muscle imbalance, which may lead to oral and craniofacial alterations. Studies have shown that 31% of children diagnosed with chronic mouth breathing exhibit articulation disorders (Alhazmi, 2022; Hitos et al., 2013; Warnier et al., 2023)

OBJECTIVE(S) AND METHODS

- Aim of this study was to determine the effect of mouth breathing on the articulation on /s/ and /z/ sounds in children aged 4–6 years
- A quantitative cross-sectional study was conducted. Sixty two 4–6 years old children were divided into mouth and nasal breathers' groups (n = 33, n = 29) based on observational screening
- Each participant underwent an assessment comprising researcher-developed /s/ and /z/ articulation tasks (64 picture cards with sounds /s/ and /z/ in all positions in the word)
- Descriptive statistics and two-sample t-tests (*p* values) were computed in Microsoft Excel

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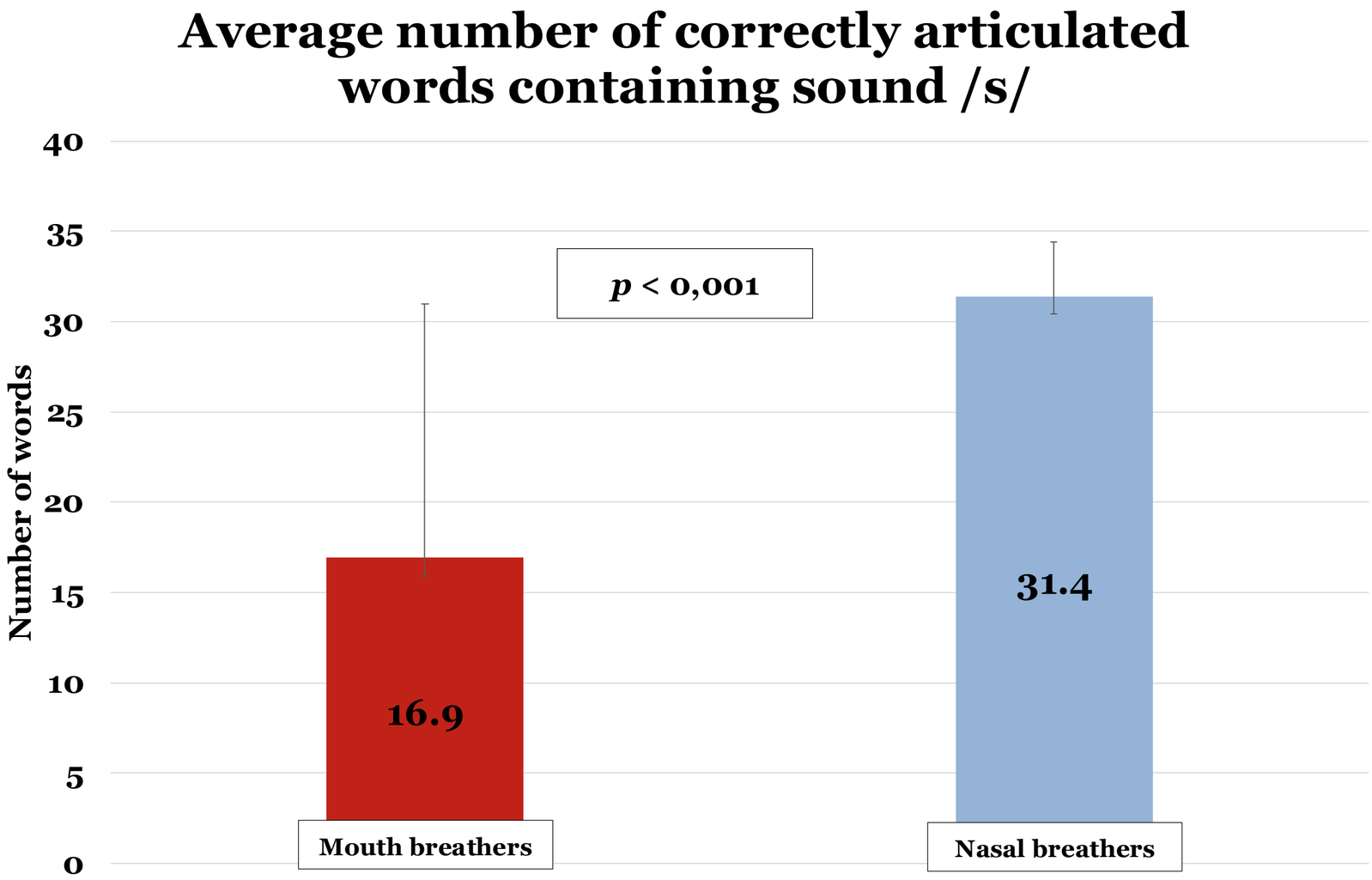
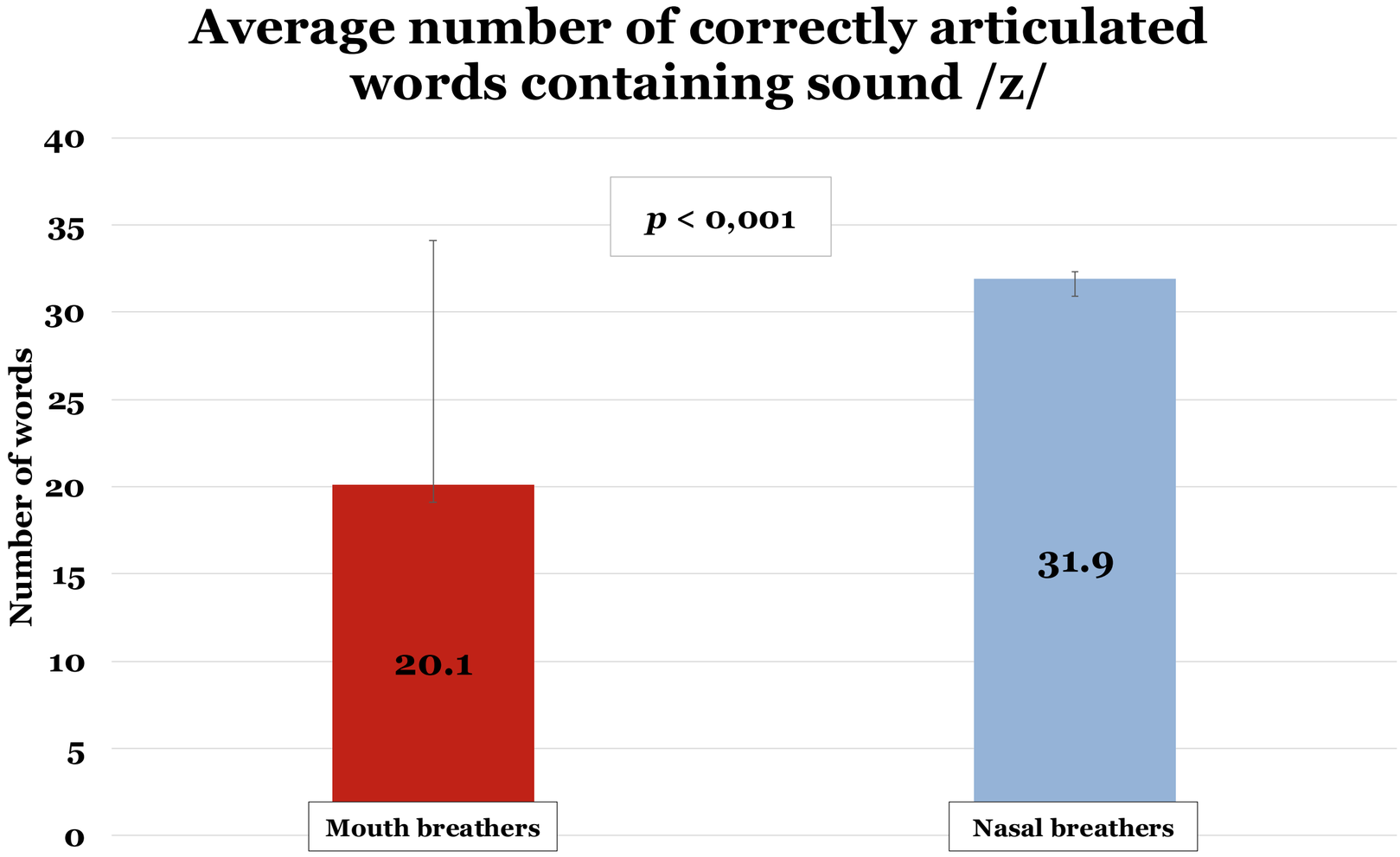
RESULTS

The mean number of correctly articulated words for the sound /s/ in mouth breathers were 16.9 (out of 32) versus 31.4 in the group of nasal breathers ($p < 0.001$)



RESULTS

The mean number of correctly articulated words for the sound /z/ in mouth breathers was 20.1 (out of 32) versus 31.0 in nasal breathers ($p < 0.001$).



CONCLUSIONS

1. The hypothesis was supported, given the statistically significant between-group differences ($p < 0.001$).
2. These findings suggest that mouth breathing may negatively affect the articulation of fricative sounds /s/ and /z/.

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