NORMATIVE NASALANCE SCORES FOR MIDDLE AGED AND ELDERLY BRAZILIAN PORTUGUESE SPEAKERS

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Objective: This study established normative nasalance values for middle age and elderly Brazilian Portuguese speakers and investigated possible age and gender effects across the lifespan. Methods: Mean nasalance scores were obtained from 62 middle age and 60 elderly participants, both genders, with normal speech for three non-nasal, two nasally loaded and one phonetically balanced test sentences using the Nasometer II 6400 (KayPentax, N.J., USA). For analysis, the nasalance scores of the middle aged and elderly speakers were combined with previously acquired data from 237 younger speakers (children, adolescents, young adults and adults; Marino et al., 2016). Repeated-measures two-way analysis of variance were used to investigate differences between the stimuli by gender and age groups. Results: There were effects of stimuli ($F(6,2082) = 12,087.12$, $p > .000001$), gender ($F(1,347) = 15.16$, $p = .000118$), age group ($F(5,347) = 16.01$, $p > .000001$), a stimuli-age group interaction effect ($F(30,2122) = 9.96$, $p > .000001$) and a gender-age group interaction effect ($F(5,347) = 2.64$, $p = .023345$). Females' mean nasalance scores were higher than those for the males. Mean nasalance scores for the young speakers were significantly lower than those for elderly speakers, and children's scores were significantly lower than those of middle-aged adults. Conclusion: Higher nasalance scores middle aged and elderly speakers may indicate physiological changes of oro-nasal balance in speech across the life span. Clinicians and researchers should consider subject´s age differences while interpretating nasalance scores, particularly when middle age and elderly are included.