The Impact of a Teaching or Singing Career on the Female Vocal Quality at the Age of 67 Years

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Due to aging, changes in vocal quality may arise (Xue & Deliyski, 2001; Mazetto de Menezes et al., 2014; Dehqan et al., 2012). In literature, no consensus exists about the possible influence of a high vocal load during the professional life. Therefore, the purpose of the present study was to assess the vocal quality in females aged between 60 and 75 years and to determine the impact of a teaching or singing career on the vocal quality. It was hypothesized that a teaching or singing career can result in a decreased vocal quality at the age of 60+ in comparison with females with a non-vocational professional career.

Methods and materials

<table>
<thead>
<tr>
<th></th>
<th>Teachers</th>
<th>Singers</th>
<th>Non-vocal professionals</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>21</td>
<td>12</td>
<td>40</td>
</tr>
<tr>
<td>Mean age (SD)</td>
<td>66y (4.60)</td>
<td>66y (4.95)</td>
<td>67y (4.36)</td>
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</tbody>
</table>

Voice assessment protocol
- Auditory perceptual evaluation
  - GRBASI
- Objective measurements
  - Aerodynamic measurements
  - Voice Range Profile
    - Fligh, Flow - high, low

Results

The vocal quality in the non-vocational professionals was characterized by the presence of increased roughness (p=0.019) in comparison with the singers and more strained (p=0.018) in comparison with the teachers.

![Graph showing vocal quality differences between teachers, singers, and non-vocal professionals.]

At the age of 67 years, a teaching or singing career has no negative impact on the female subjective and objective vocal quality. Further research can focus on the evaluation of other influencing variables, such as medication, on the elderly voice. Additionally, the effect of a high vocal load during the professional career can be analyzed in men to verify the possible difference of this influencing factor between men and women.

References
Mazetto de Menezes, K. S., Master, S., Guzman, M., Bortinem, C., & Ramos, L. R. (2014). Differences in acoustic and perceptual parameters of the voice between elderly and young women at habitual and high intensity. Acta Otorrinolaringologica Española, 65, 76-84