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## Letter to the editor

## In regards to: voice symptom scale – VOISS: administration and score calculation

Referente a: Escala de Sintomas Vocais – ESV: forma de aplicação e cálculos do instrumento

Mara Behlau<sup>(1,2)</sup> Felipe Moreti<sup>(1,2)</sup> Fabiana Zambon<sup>(1,2)</sup> Gisele Oliveira<sup>(2)</sup>

- (1) Universidade Federal de São Paulo UNIFESP - São Paulo (SP), Brasil.
- (2) Centro de Estudos da Voz CEV São Paulo (SP), Brasil.

Conflict of interest: non-existent

Dear Scientific Editor of Revista CEFAC Prof. Dr. Simone Aparecida Capellini,

We are writing this letter to clarify some important aspects regarding the article published in Revista CEFAC, titled "Vocal symptoms of future professional voice users".

First of all, we would like to congratulate the authors for evaluating the vocal risk of future professional voice users. Actions like these prevent the development of dysphonia and potential frustration, which alone provide reason why the study is warranted. However, we were very concerned with the severity of the results, since the study was performed during a World Voice day screening. The conclusion of the study states that the individuals that were screened have a voice disorder.

There are several aspects to be considered in regards to the process of selecting participants and choosing the self-assessment instrument to be used. Below we highlight the issues related to the inclusion and exclusion criteria, the self-assessment instrument used and the references:

1. The inclusion criteria presented are vague: "adherence to the Informed Consent, female and male genders, being a college student that once graduated will use his/her professional voice for working purposes". Two aspects drew our attention. First, the criterion of including participants from "any gender", which actually does not exclude anybody, therefore is not very important. The other one, which is more concerning, is the superficial definition of future professional voice users. Practically, all professions use oral communication, to a greater or lesser degree, according to the area of expertise and the place of work. Since it is a scientific research investigating future professional voice users, this category should have been carefully described. There are several professional voice user classifications available and published in the literature. One of them comes from Koufman and Isaacson (1991)<sup>2</sup>. They suggest a classification based on vocal demand and voice deviation impact. The classification allocates the professionals

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## Mailing address:

Mara Behlau
R. Machado Bittencourt, 361/1001, Vila
Clementino
São Paulo – SP, Brasil, CEP: 04044-001.
E-mail: mbehlau@uol.com.br

as elite vocal performer, professional voice user, non-vocal professional, non-vocal non-professional. Another classification is from Shewell (2009)3 that classifies professionals according to the vocal demand into supporters, callers, transmitters, informers, leaders, sellers and performers3. The inclusion criterion currently presented does not have a defined configuration1, therefore the individuals selected are not known.

- 2. The exclusion criteria are also vague and seem to be, in a way, incompatible with the inclusion criteria. The exclusion criteria presented were: "neurological and psychiatric disorders that could have limited the comprehension of the Informed Consent and the selfassessment instrument (VoiSS); individuals that were currently working or worked in the past as a professional voice user; hearing complaints; future singers; incomplete self-assessment information" 1. Once more, the criteria for defining a professional voice user are not clear, the individuals that were excluded are not known, and finally the reason for excluding singers is not clear.
- 3. The screening instrument was inadequately presented. The Brazilian version of the VoiSS4, just as its original version, is a self-assessment instrument that evaluates vocal symptoms and the impact of a voice problem. It has 30 items, with partial and total scores obtained by simple summation of the raw scores and not by their average. In the current article<sup>1</sup>, the authors use the VoiSS<sup>(4)</sup> incorrectly as a list of symptoms, ranging from 0 to 30. The article provides a wrong interpretation about the instrument and its calculation. The VoiSS4 is not a list of symptoms that can provide the average quantity of vocal problems, the expected frequency, or negative and positive aspects. These data are presented on tables 1 to 51. Moreover, the instrument is a perfect classifier with a cutoff value of 16 points. This finding was previously published in an easily accessed scientific journal<sup>4,6</sup>. The cutoff value could have been used as a pass or fail criteria for the screening.
- 4. The value obtained as the mean total score for the VoiSS in the current study4 is surprisingly deviated (varying from 43.28 points to 55.001). This mean total score does not allow for the characterization of the population as future professional voice users, rather it classifies the population as a dysphonic group that looked for screening during a voice campaign for the treatment of an existing problem. In the validation

study of the VoiSS4, the mean total score for individuals from the general population was 7.11 points, and the mean for the dysphonic population was 49.43 points. The authors of the current study state that the values reported above suggest that the individuals could be at vocal risk, which is inadequate as the values obtained are severely deviated and thus should have been interpreted in this manner. It is not clear how many participants failed the assessment, however the occurrence of dysphonia in the general population varies from 3 to 8% and it can reach up to 20% in professional voice users. The current article gives away that this percentage is much greater. Skewing in the data collection and data analysis should have been considered. We also do not know what was recommended to the subjects after the screening, whether they were referred to medical and/ or voice evaluation. The publication of these results is distressing.

5. Imprecise references. The correct reference for the VoiSS4 is the validation article published in 2014 and not the abstract of the thesis published in 2012. Moreover, the cultural adaptation reference was mistakenly entitled "Transcultural adaptation of the Brazilian version of the Voice Symptom Scale: VoiSS", when in truth the title of the publication is "Cultural equivalence of the Brazilian version of the Voice Symptom Scale - VoiSS"7.

Finally, we highlight the fact that the objective of the study1 is interesting and up-to-date; however, we are profoundly alarmed by the consequences of the mistakes and the imprecisions that were pointed out. Adequate control of the experimental design within its several stages is just as important as the impact produced on the scientific reader, in this case the Speech-Language Pathologist.

Cordially,

Mara Behlau **Felipe Moreti Fabiana Zambon** Gisele Oliveira

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