Voice health of teachers in the north of Portugal: epidemiological indicators

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[Introduction]

Educational Professionals, generally identified as teachers, represent a group of several related professions (e.g., kindergarten, school or university teachers) that in some grade represent the professional activity of teaching or educating others. Teachers are classified as Voice Professionals because speech is their main communication tool, so they depend of their vocal quality for professional survival. They are also considered the occupational group with higher risk levels to develop Voice Disorders (VD) and they have been target of several studies describing prevalence, symptoms, social and occupational life impact and even prevention programs evaluation.

In Portugal, a previous study (Martins, 2012) estimated a global economic impact of over 4,500,000/year associated with occupational voice disorders in teachers. Based in these results a Voice Prevention Program promoted by a teachers’ syndicate was implemented in northern Portugal, the region with the highest number of teachers in Portugal (34% = around 96,000 teachers).

The aims of this study were to determine a) the prevalence of Voice Disorders self-reported by teachers of northern Portugal region, b) the most frequent voice symptoms, and c) the risk and protection factors associated with voice disorders in this group.

[Methods]

- Quantitative, observational, descriptive and transversal study
- Non-probabilistic sample type
- Sample: 405 teachers from northern Portugal (districts: Aveiro, Braga, Bragança, Porto, Viana do Castelo and Vila Real)
- Instrument: Self-directed questionnaire, previously validated, describing the previous 12 months
- Questionnaire structure: personal data; professional characteristics; environmental factors; personal factors and voice complaints
- A paper version of the questionnaire was delivered to all the teachers who participated in the Voice Prevention Program, during October to November of 2014
- Data analysis tools: Cardiff Teleform, IBM SPSS v.22 and Microsoft Excel 2010
- Adjusted Odds Ratios (OR) and their confidence intervals at 95% were calculated. Significance level was determined at the 5% level.

[Results]

- Higher prevalence in women (59.7% vs 44.6%) *
- Freitas (2006) – 10.4%
- Martins (2012) – 58.4%
- Lobato (2010) – 57%
- Mário et al. (2011) – 8%
- Freitas et al. (2010) – 11.6%
- Nobre et al. (2009); Van Houtte et al. (2011); Verdelho & Ferri (2001)

[Conclusion]

HIGH VOICE DISORDERS’ PREVALENCE – 56.8%

In the last 12 months 56.8% teachers presented VD

1. Dry throat
2. Extra effort to speak or sing
3. Tired and weak voice
4. Hoarse and rough voice
5. Scratchy throat

Alert signals included in voice prevention actions should explore these symptoms

TOP 5 VOICE SYMPTOMS

1. Gastroesophageal reflux
2. Limited access to water
3. Snoring
4. Sleeplessness
5. Teaching seminars

RISK FACTORS

- Aranhas profile
- Gastroesophageal reflux
- Limited access to water
- Depression problems
- Teaching general disciplines
- Female gender
- Snoring
- Study environment
- Teaching in 1st cycle level
- Smoking
- Yelling

PROTECTION FACTORS

- Teaching physical and chemical sciences
- Teaching in high school level
- Natural ventilation

- High impact prevention actions should attend to these factors
- Larger studies are needed to explore combinations between factors