

An Investigation of the Voice Handicap Index with Speakers of Portuguese: Preliminary Data

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Summary: Although the Voice Handicap Index (VHI) has been recognized as a useful tool for quantifying American English speakers' perceived consequences of voice disorder, it has not yet been widely applied in the clinic to study dysphonic patient populations, or tested with a normally speaking population. The purpose of this investigation was to obtain information about the VHI in a group of Portuguese speakers with voice complaints compared with an age- and gender-matched group of speakers without voice complaints. The results demonstrate that speakers with voice complaints have overall VHI total scores significantly higher than speakers without voice complaints ($p < 0.001$). This is also true for all VHI subscores in the emotional ($p < 0.001$), functional ($p < 0.05$), and physical ($p < 0.001$) domains. So, the assumption that a group with voice complaints has higher voice handicap impact than the matched control comparison group is justified for Portuguese speakers.

Key Words: Voice Handicap Index—Dysphonia—Portuguese speakers.

INTRODUCTION

Measurement of the health status of individuals based on the standard medical framework has always played a high-priority role in clinical trials. Within the framework of health measurements used by clinicians (and obviously more connected to the traditional physiological and biological views of health status), methods for investigating a patient's health-related quality of life have more re-

cently been regarded as useful and important supplements to the clinical decision-making process by providing important insights into the impact of the disease on the subject's life from his/her own perspective. Even though a myriad of assessment measures for disease and impairments exist, this is not the case for measures of "health quality of life," especially in the field of voice pathology.

A review of the literature published in the last few years reveals a modest number of studies dealing with the development of standardized voice-related quality-of-life (VQoL) instruments¹⁻⁴ and their application.⁵⁻¹² A possible reason for this may be the multifactorial nature of the conceptual basis of quality of life and the consequent complexity of measuring it. A reasonably comprehensive measure should include domains that are generally accepted as major contributors to health-related quality of life such as physical, social, psychological functioning, family and social support, and disease- and treatment-related symptoms.¹³

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Another possible limitation may be the fact that, within the medical sciences, investigation of the quality of life is focused initially on the quality of survival in life-threatening conditions such as cancer, and as Verdolini et al¹⁴ stated, voice disorders (and other communication disorders) may be viewed as less serious conditions with less-visible constraining effects. In fact, one of the first VQoL instruments was developed by Llewellyn-Thomas et al¹ for patients with laryngeal cancer. Based on this, a specific instrument that rated voice symptoms and function on a linear analogue scale, other authors created similar scales also for patients with glottic cancer treated with radiotherapy.^{15,16} Surprisingly, Smith et al² found that patients' voice-related quality of life reports were in a similar or worse range of severity than those reported by patients with medical conditions generally considered more serious (eg, cancer, rheumatoid arthritis, and asthma).

Meanwhile, partly because the concept of voice problems affecting the subjects' well-being is deeply embedded in the clinician's consciousness, and as Verdolini¹⁷ estimates, 50% to 60% of clinical patients with voice disorders report social, communicative, physical, and psychological problems as a result of the voice disorder, several studies have started to show the importance of self-reported multi-item questionnaires as an outcome measure.²⁻⁵ Their application to the general range of voice problems,^{2,3,5} to specific voice professionals,^{18,19} to specific laryngeal diseases,^{15,16,20,21} and to the measurement of the effectiveness of voice therapy and surgical techniques^{8,14,22,23} started to grow in the health field.

An important contribution to this field was the development of a VQoL standardized self-assessment ordinal scale, the Voice Handicap Index (VHI) by Jacobson et al.³ The VHI produces a nonstandardized index of the subject's self-rating degree of his/her voice-related problems in three domains: emotional, functional, and physical.

The items were developed from patients' statements taken from case history interviews with speakers with a wide variety of voice disorders. It is a 30-item questionnaire in which the subjects have to rate the statements in three domains using a five-point equal scale scored from zero (never) to four (always). The higher the score, the greater the voice-

related problem. The VHI proved to have good internal consistency, good test-retest reliability, and correlation with patients' judgment of voice disorder severity. Domain scores have been shown to have a correlation between 0.70 and 0.93. However, scores from a control group have not yet been reported, and thus, there is no baseline data from nonclinical speakers.

Subsequent studies found that the VHI tool correlates significantly with the Medical Outcomes Trust Short Form 36-Item (SF-36).^{2,6}

Benninger et al⁵ found that the mental health, general health, and role functioning domains of SF-36 correlate significantly with the VHI domains and total score. Stewart et al⁶ also used the same tools as Benninger et al⁵ in a retrospective study with laryngeal cancer patients who had been treated with laryngectomy or radiotherapy or both. They found significant correlation between the SF-36 items that were represented on the VHI such as social functioning (VHI Emotional) and role functioning (VHI Physical). They also found that laryngectomy patients had higher VHI scores than did the radiotherapy patients. Age, lack of employment, and lower level of education did not predict significantly worse VHI scores. However, patients living alone presented significantly lower VHI functional subscale scores.

Wuyts et al²⁴ found a significantly high correlation ($r = -0.79$) between VHI and the DSI (dysphonia severity index), an objective measure of vocal quality based on a multiparameter approach. The study involved 68 "normal" speakers and 319 dysphonics. Unfortunately, VHI data for the total and subscales scores is not reported.

A study with the VHI tool in 106 singers and 369 nonsingers with voice complaints by Rosen and Murry⁷ showed that singers score significantly lower (less severe) when compared with nonsingers. Within the singers, professional voice singers also show lower significant scores when compared with recreational singers. The authors suggest that this difference may be related to the nature of the VHI tool or the specificity of singers' voice problems.

Rosen et al⁹ in a study including patients with unilateral vocal fold paralysis (UVFP), muscle tension dysphonia (MTD), vocal fold polyp, and vocal cyst grouped in VFP/C indicate that VHI is sensitive to speaker's perception of voice change after different types of intervention (surgery, medical, and voice

therapy) and is therefore a useful instrument to measure treatment efficacy. Similarly, Spector et al¹⁰ also identified that the VHI is an important tool in the evaluation of patients with UVFP before and after thyroplasty.

The purpose of the present study was to determine whether quantifiable differences in VHI scores exist between adult Portuguese speakers with voice complaints and speakers without voice complaints. A second aim was to investigate the influence of variables such as gender and age on the VHI results. No previous study has reported data on this issue for native speakers of Portuguese, and it is expected that this preliminary information will contribute to the relatively sparse data already obtained for the VHI.

METHODS

Subjects

The subjects were 49 patients at the ENT unit of the Hospital de S. José in Lisbon and 56 unpaid volunteers for comparison purposes. Prior to the assessment protocol, each subject was given a verbal explanation of the purposes and the procedures of the experiment, and if he/she agreed to participate, a consent form was signed.

In this study, a speaker was included in the “dysphonic” group when she/he presented with a voice complaint on the day of the ENT assessment or had a history of permanent/frequent voice problems not related to upper respiratory tract infection (URTI) or allergic situations and for which the SLT and the ENT surgeon found corroborative evidence.¹⁷ Speakers enrolled as “controls” only if they did not have voice complaints on the day of the ENT assessment or a history of permanent/frequent voice problems not related to URTI or allergic situations and for which the SLT and the ENT surgeon found corroborative evidence.¹⁷

Demographic information including age, gender, level of education, occupational voice use, and domestic arrangements is shown in Table 1.

Both groups are similar in age, years of education, percentage of gender distribution, occupational voice use, and domestic arrangements.

TABLE 1. Demographic Information

	Dysphonics N = 49	Controls N = 56
Age		
Mean	44 ± 12.6	38 ± 15
Range	19–64 yrs	20–67 yrs
Education		
Mean	11 ± 5	13 ± 4
Gender		
Female	37	42
Male	12	14
Occupational voice use		
Professional voice user	13	13
Non professional voice user	16	21
Nonvocal nonprofessional voice user	20	22
Domestic arrangements		
Alone	8	9
With others	41	47

There is a fairly similar gender distribution between the groups with a higher representation of females (at least 75%) in both groups.

For both groups (dysphonics and controls), the most represented occupation voice group is the non-vocal nonprofessional.

Table 2 shows the frequencies of ENT diagnoses for the speakers in both groups.

The most common ENT diagnoses in the dysphonics were functional disorders (46.9%) mass lesions (24.5%), and tissue changes (20.4%). In the control group, 42.9% of the speakers had structural or physiological minor abnormalities (Table 2).

Procedures

A two-phase multidisciplinary voice study was conducted in the ENT Department of Hospital S. José in Lisbon between January and September 2000. It involved a semistructured interview using a questionnaire that solicited background information about subject's personal details, social, health, and voice history. Nasolaryngostroboscopic examination, perceptual voice assessment, electrolaryngographic and acoustic analyses, speakers' self-rating level of VQOL,³ and speakers' self-rating of life-events²⁵ were also carried out. Only data from the VHI questionnaire will be discussed here.

The original VHI is in English and has been used successfully with different dysphonic populations^{5,7}

TABLE 2. ENT Diagnoses

	Dysphonics N = 49	Controls N = 56
Healthy larynx	3	32
Structural or physiologic minor abnormalities	1	24
Functional disorders	23	0
Mass lesions	12	0
Tissue changes	10	0

as well as an outcome measure for laryngeal treatment,^{6,9-11} and it has no equivalent in Portuguese. It is also an easy and non-time-consuming instrument in terms of administration and scoring. Moreover, the selected statements and domains used seemed relevant as voice-related quality-of-life areas to Portuguese speakers with voice complaints, according to the principal author's clinical experience. Therefore, creation of a new questionnaire seemed counterproductive, and translation of the VHI was attempted following the recommendations from the field centers involved in the development of quality-of-life instruments (www.qelmed.org).

The first direct translation was made by the first author, a speech and language therapist (SLT), a specialist in voice for 15 years, and back-translated by a Portuguese native speaker, teacher of Portuguese and English (who completed a Master's degree at the University of London in 1998-1999). A bilingual (Portuguese/English) SLT who had specialized in language disorders for more than 20 years compared the translated version with the original one. No consensus was found for the word "creaky" in item P13 either in perceptual terms "estaladiça" or in terms of the speaker's sensation "áspera."

The Portuguese VHI version was then tried with a number of Portuguese speakers without voice problems who did not participate in this study. Doubts arose with the translation of the perceptual "creaky" ("estaladiça"), but the translation "áspera" for the physical sensation was well accepted. After these procedures, the original words were maintained in a pretesting study involving 31 Portuguese speakers. From those, 21 subjects presented with a voice complaint ("dysphonic group") ranging in age from 34 to 66 years with a mean of 49. The other 10 subjects without a voice complaint ("control group")

had a mean age of 43, with a range from 31 to 67 years old.

Each subject was asked to complete the VHI questionnaire and was told that they could ask if they were doubtful about anything. Although the questionnaire had written instructions, oral instruction was also given. Assistance was given for those who had visual difficulties. All subjects commented positively on the fact that the questionnaire was easy to answer, not time consuming, and interesting as a reminder of some voice situations that are not usually talked about.

The main study was conducted with the VHI amended version (in item P13). A total of 113 subjects were presented with a Portuguese version of the VHI questionnaire, and oral instruction was given as well as the written instructions at the top of the instrument. A few speakers (eight) with visual difficulties with a low level of literacy or who were illiterate asked for assistance.

Analyses

Data from the history data questionnaire, ENT examination, and VHI questionnaire were analyzed speaker by speaker and edited in the SPSS (SPSS, Inc., Chicago, IL) version 10.

Data from the history questionnaire were tabled according to demographic information (age, years of education, living arrangements, occupational voice use). Based on Koufman and Isaacson's (1991 in Stemple²⁶) professional voice users classification, the speakers' occupations were organized into three different groups.

Data collected during the ENT examination for each speaker was classified into six groups.^{17,27} The first group, "healthy larynx," represents the speakers with normal structural larynx appearance and function. The "structural and physiological minor abnormalities" group includes diagnoses such as posterior glottal chink and slight anterior arytenoids projection without history of voice complaints. The "functional disorder" group comprises diagnoses such as normal structural laryngeal appearance but hyperfunctional or hypofunctional laryngeal mobility. The "mass lesions" group represents nodules, polyps, cysts, granuloma, and leukoplakia. The "tissue changes" group represents chronic laryngitis,

TABLE 3. Mean VHI

Group	N	Total	Emotional	Functional	Physical
Dysphonics	49	34.4 ± 3.2	8.5 ± 1.0	8.5 ± 1.2	17.4 ± 1.2
Controls	56	10.5 ± 1.8	2.0 ± 0.6	3.3 ± 0.6	5.2 ± 0.7

M (mean) ± SD (standard deviation).

Reinke's edema, sulcus vocalis, vocal fold scar, and hemorrhage.

Descriptive statistics were used to analyze the data gathered in the main study. A general linear model (GLM) repeated-measures analysis ANOVA was carried out with group (dysphonics and controls), gender, and age (19 to 40 years and 41 to 69 years) as a between factor, and the total and subtotal VHI scores as a within factor. Probability values $p > 0.05$ were considered nonsignificant (ns).

The significant interactions resulting from these analyses were followed by post hoc comparisons.

RESULTS

Eight speakers were excluded from further analyses because they failed to respond to the questionnaire (because of literacy difficulties); therefore, the total data correspond to 105 speakers.

Group means and standard deviation data for each of the dependent measures by study group are listed in Table 3.

According to the data presented in Table 3, the mean and standard deviation total and subtotal scores for the speakers' self-rated psychosocial voice impact score are higher for dysphonics (so more severe) than for the control speakers. Multiple repeated analyses revealed that the main effect of group was statistically significant ($F(1,97) = 28.16$, $p < 0.001$).

Moreover, there is a highly significant difference within the VHI subscores ($F(1,130) = 85.53$, $p < 0.001$).

In fact, the physical VHI subscore is higher than the two other subscores (emotional and functional) in both groups, although for dysphonics, that difference was greater than for controls.

Post hoc comparisons confirmed a statistically significant difference between the subtotal scores for all the speakers, with an exception for the difference

between the emotional and functional scores in the dysphonics ($t = 0.153$, $df = 50$, $p > 0.05$).

Figure 1 shows that intersubject variability is also higher in the dysphonics than in the controls.

As is evident from Figure 1, the resulting boxplots of the total and subtotal VHI scores distribution show a large difference in magnitude for dysphonics compared with controls, which confirms that self-perceived voice-related problems vary widely among individuals, especially in dysphonics.

In fact, a detailed analysis of the frequency distribution of the ratings according to each subscale shows that in the control group, more than 80% of the speakers rate their answers (in all subscales) between "never" and "almost never," whereas in the dysphonic group, the speakers' ratings varied widely along the five possible answers (between "never" and "always").

Figure 2 presents the overall mean VHI scores according to gender. Although females had higher VHI scores than males in both groups, the main effect of gender was not statistically significant ($F(1,97) = 1.342$, $p > 0.05$).

Figure 3 presents the overall mean VHI scores according to age. The main effect of age was not statistically significant ($F(1,97) = 0.060$, $p > 0.05$), although overall older speakers show higher VHI scores than young ones.

An examination of the VHI scores according to the ENT diagnoses is shown in Figure 4.

According to the data, the speakers with an ENT diagnosis of functional disorders, tissue changes, and mass lesions show higher VHI scores (more severe voice impact) than the healthy and minor abnormalities.

DISCUSSION

One of the principal questions motivating this investigation was whether the VHI questionnaire

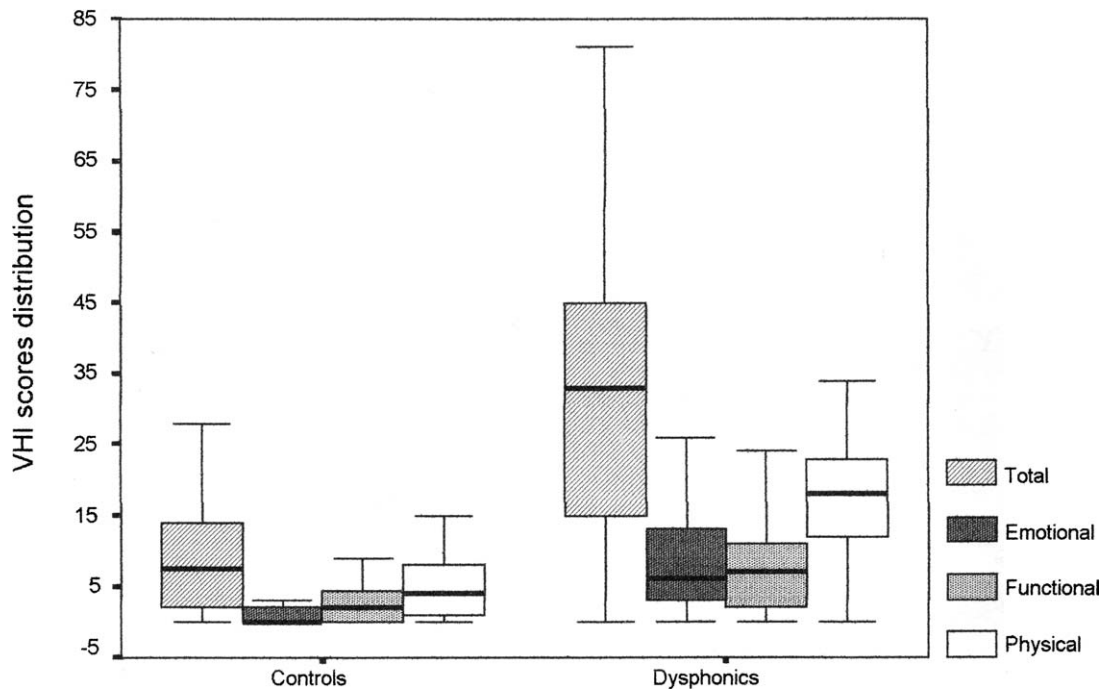


FIGURE 1. VHI scores distribution for the controls and dysphonics.

identifies the specific self-rated voice-related problems in Portuguese adult speakers with voice complaints. The results seem to provide evidence that significantly higher differences, on average, in all VHI scores exist between adult Portuguese speakers with voice complaints and speakers without voice complaints.

It is not possible to establish if the VHI data obtained in this study is within the limits of the published data because there is only a modest number of studies using this tool and either data are not mentioned^{5,9} or they are for other larynx pathologies⁶ or singers⁹ both absent from the present study. Moreover, no data for normal speakers was found in the literature. Nevertheless, within the limitations, a comparison can be made between the mean group data in this study and those obtained in Rosen and Murry⁷; the mean group data for the nonsinger dysphonics in Rosen and Murry⁷ are higher than the data of dysphonics from the present research. These discrepancies may be attributable to unknown factors (eg, cultural) or methodological differences between the studies. In fact, Rosen and Murry⁷ in their nonsinger group considered an age

range between 6 and 79 years, and because voice is aged-related, results may be biased by voice characteristics common to different age stages (infancy, puberty, and elderly).

Comparison between the groups showed that dysphonic speakers present statistically significantly more marked psychosocial voice impact than the normal speakers. This finding shows that the questionnaire is sensitive to dysphonia, and the results, despite the methodological differences, are in line with the previous research.^{2,8,16}

No significant effect of age or gender was found, although females and older subjects showed higher psychosocial voice impact scores. The nonsignificant effect of age is in line with some studies^{6,7} but in contradiction with Smith et al's² findings. These discrepancies may be related to bias in the samples related to employment status, domestic arrangements, or other unknown factors.

Within the subscales (functional, emotional, and physical), there was no statistically significant difference between the emotional and functional subscores for the dysphonic subjects. This finding allows speculation about the duration of the voice

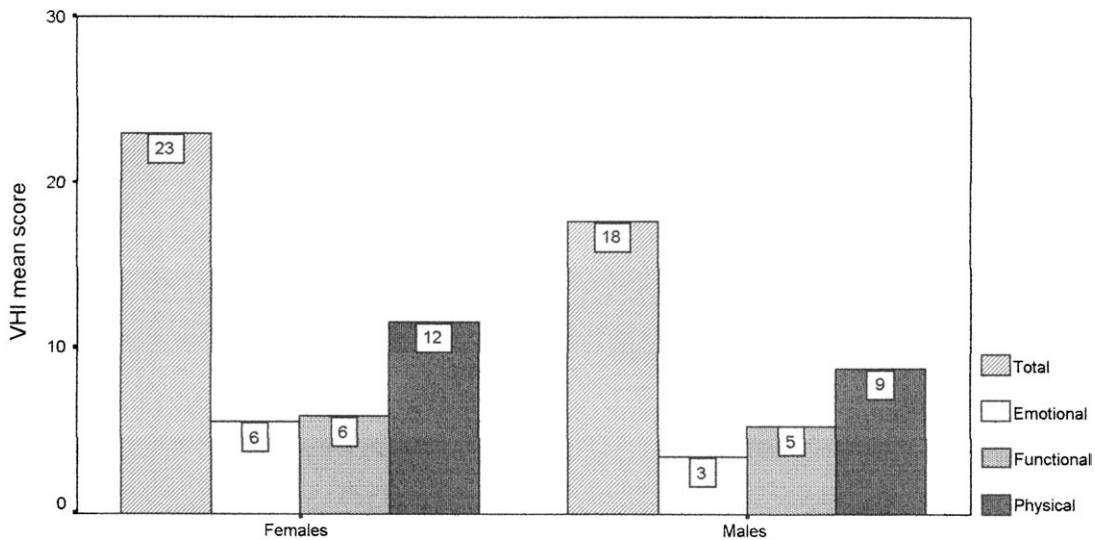


FIGURE 2. VHI mean scores according to gender.

symptoms (chronicity) of the speakers in the present research (more or less than 44% of the speakers had experienced dysphonia for between 1 and 5 years, and 35% for more than 10 years) and the possible coping strategies used by them and the acceptability of the disorder. Smith et al² note that some people seem to tolerate their vocal symptoms for a considerable time.

Full consideration of the implications of the present investigation must await the outcome of a future investigation with more refined methodology and a larger sample. There are several important limitations in this study that should be discussed. First, as noted, the findings were obtained from a translated questionnaire whose reliability and validity were not formally tested. However, unlike most validation studies of new questionnaires, it was translated according to the specific requirements for VQOL tools, was previously tried in a pilot study, has been refined by reference to an age- and gender-matched control group of adult speakers without voice complaints, and it was also used in an adequate sample size for statistical precision. In light of the difference between the two groups, it proved to be a useful questionnaire. Second, although strict speaker selection criteria were previously defined, it was not possible to control for all potential variables, so there

is a problem of selection bias (male speakers differ in age).

A third caveat is the fact that the findings were obtained from a convenience sample, not representative of the universe of laryngeal pathologies, so its sensitivity in, and power to generalize to, other pathologies is unknown. However, the prevalence of laryngeal pathologies according to gender is similar to that suggested by Stemple et al²⁸: nodules and psychogenic disorders for females, and cancer, leukopakia, and hyperkeratosis for males. Although cross-study comparison can hardly be made because of design and sample variability, our results are partially comparable with those from Rosen and Murry.⁷ For example, in their study, nonsingers with vocal cysts had higher VHI scores overall than did those with vocal nodules as in our study. Further replication of this study design with different laryngeal pathologies would enable greater validation of the instrument.

The present study also demonstrates that the questionnaire content needs continued scrutiny. For example, in item F5, "My family has difficulty hearing me when I call them throughout the house," and in item F6, "I use the phone less often than I would like," speakers referred to the fact that the reason could be the dimension of the house and economic

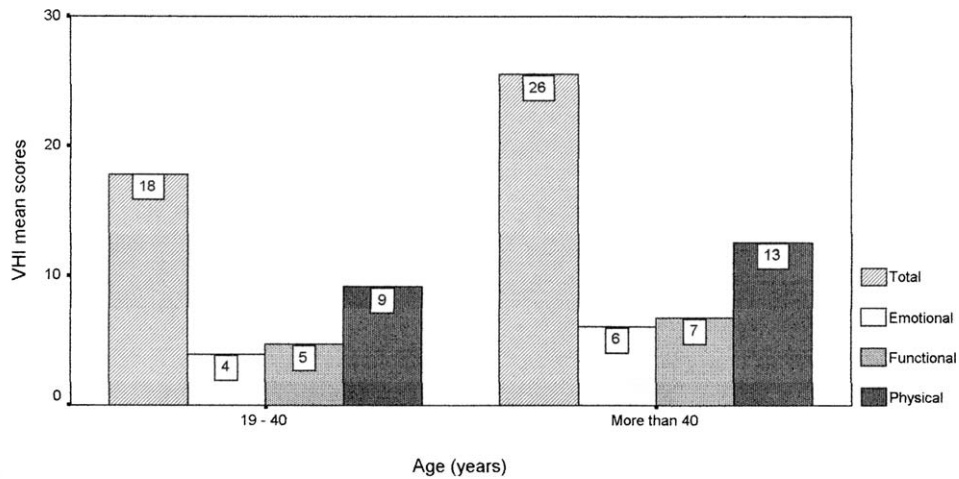


FIGURE 3. VHI mean scores according to age.

factors, respectively. In fact, these are the only two items in the questionnaire where “because of my voice” is not stressed. We recommend the inclusion of this information in further studies.

CONCLUSIONS

The results from this study seem to show that speakers with voice complaints scored significantly higher, which indicates more voice-related prob-

lems, than matched speakers without voice complaints. Thus, the Portuguese version of the VHI seems to be a brief, relevant, and valid self-rating questionnaire to add to the routinely used clinicians’ assessment battery to contribute to the complex decision-making process (diagnosis, therapy, counseling) and outcome. Obviously, additional studies, with more refined methodology, are needed to investigate further the validity and generalizability of the present findings.

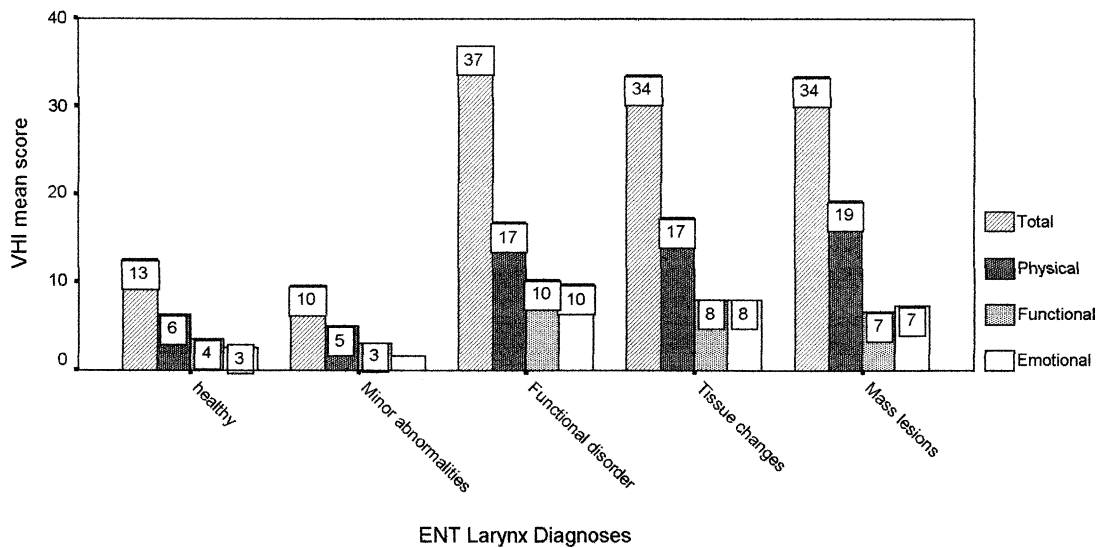


FIGURE 4. VHI according to ENT diagnoses.

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APPENDIX

VHI (Voice Handicap Index)

English/Portuguese

Instructions: These are the statements that many people have used to describe the effects of their voices on their lives. Check the response that indicates how frequently you have the same experience. (Never = 0 points; Almost never = 1 point; Sometimes = 2 points; Almost always = 3 points; Always = 4 points).

Instruções: Estas são declarações que muitas pessoas usaram para descrever os efeitos das suas vozes, nas suas vidas. Assinale a resposta que indica com que frequência teve a mesma experiência (Nunca = 0; Quase nunca = 1 ponto; Às vezes = 2 pontos; Quase sempre = 3 pontos; Sempre = 4 pontos).

	Never <i>Nunca</i>	Almost never <i>Quase nunca</i>	Sometimes <i>Às vezes</i>	Almost always <i>Quase sempre</i>	Always <i>Sempre</i>
F1 My voice makes it difficult for people to hear me.					
F1 <i>A minha voz faz com que seja difícil os outros ouvirem-me.</i>					
P2 I run out of air when I talk.					
Fi2 <i>Falta-me o ar quando falo.</i>					
F3 People have difficulty understanding me in a noisy room.					
F3 <i>As pessoas têm dificuldade em me compreender num local ruidoso.</i>					
P4 The sound of my voice varies throughout the day.					
Fi4 <i>O som da minha voz varia ao longo do dia.</i>					
F5 My family has difficulty hearing me when I call them throughout the house.					
F5 <i>A minha família tem dificuldade em me ouvir quando os chamo dentro de casa.</i>					
F6 I use the phone less often than I would like.					
F6 <i>Uso menos o telefone do que gostaria.</i>					
E7 I'm tense when talking with others because of my voice.					
E7 <i>Fico tenso quando falo com os outros por causa da minha voz.</i>					
F8 I tend to avoid groups of people because of my voice.					
F8 <i>Costumo evitar grupos de pessoas por causa da minha voz.</i>					
E9 People seem irritated with my voice.					
E9 <i>As pessoas parecem irritadas por causa da minha voz.</i>					
P10 People ask, "What's wrong with my voice?"					
Fi10 <i>As pessoas perguntam 'O que se passa com a minha voz?'</i>					

(Continued)

APPENDIX (continued)

	Never <i>Nunca</i>	Almost never <i>Quase nunca</i>	Sometimes <i>Às vezes</i>	Almost always <i>Quase sempre</i>	Always <i>Sempre</i>
F11 I speak with friends, neighbours, or relatives less often because of my voice.					
Fi11 <i>Falo menos com amigos por causa da minha voz.</i>					
F12 People ask me to repeat myself when speaking face-to-face.					
Fi12 <i>As pessoas pedem-me para repetir quando falamos cara a cara.</i>					
P13 My voice sounds creaky and dry.					
Fi13 <i>A minha voz é áspera e seca.</i>					
P14 I feel as though I have to strain to produce voice.					
Fi14 <i>Sinto como se tivesse de me esforçar para produzir voz.</i>					
E15 I find other people don't understand my voice problem.					
Fi15 <i>Sinto que as outras pessoas não compreendem o meu problema de voz.</i>					
F16 My voice difficulties restrict my personal and social life.					
Fi16 <i>As minhas dificuldades com a voz limitam-me a minha vida pessoal e social.</i>					
P17 The clarity of my voice is unpredictable.					
Fi17 <i>A clareza da minha voz é imprevisível.</i>					
P18 I try to change my voice to sound different.					
Fi18 <i>Tento modificar a minha voz de modo a soar diferente.</i>					
F19 I feel left out of conversations because of my voice.					
Fi19 <i>Sinto-me fora das conversas por causa da minha voz.</i>					
P20 I use a great deal of effort to speak.					
Fi20 <i>Faço muito esforço para falar.</i>					
P21 My voice is worse in the evening.					
Fi21 <i>A minha voz está pior à noite.</i>					
F22 My voice problem causes me to lose income.					
Fi22 <i>O meu problema de voz causa-me problemas económicos.</i>					
E23 My voice problem upsets me.					
Fi23 <i>O meu problema de voz preocupa-me.</i>					
E24 I am less outgoing because of my voice problem.					
Fi24 <i>Saio menos por causa do meu problema de voz.</i>					
E25 My voice makes me feel handicapped.					
Fi25 <i>A minha voz faz-me sentir deficiente.</i>					
P26 My voice "gives out" on me in the middle of speaking.					

(Continued)

APPENDIX (continued)

	Never <i>Nunca</i>	Almost never <i>Quase nunca</i>	Sometimes <i>Às vezes</i>	Almost always <i>Quase sempre</i>	Always <i>Sempre</i>
Fi26 <i>A minha voz 'falha' quando estou no meio de uma conversa.</i>					
E27 I feel annoyed when people ask me to repeat.					
E27 <i>Sinto-me irritado quando as pessoas me pedem para repetir.</i>					
E28 I feel embarrassed when people ask me to repeat.					
E28 <i>Sinto-me embaraçado quando as pessoas me pedem para repetir.</i>					
E29 My voice makes me feel incompetent.					
E29 <i>A minha voz faz-me sentir incompetente.</i>					
E30 I'm ashamed of my voice problem.					
E30 <i>Tenho vergonha do meu problema de voz.</i>					

Note: The letter preceding each item number corresponds to the subscale (E, emotional subscale, F, functional subscale, P, physical subscale).

Nota: A letra que precede cada número em cada item corresponde à sub-escala (E, emocional, F, funcional e Fi, física).