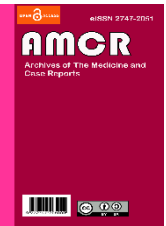




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Voice Handicap Index (VHI) as Diagnostic Tools for Dysphonia Disorder: Narrative Literature Review

Ramakrishnan^{1#}, Gopala Krishna¹

¹ Sri Ramachandra Medical College and Research Institute, Chennai, Tamil Nādu, India.

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*Corresponding author:

Ramakrishnan

E-mail address:

ramakrishnan@srmc.edu

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ABSTRACT

In the diagnosis of dysphonia, assessing the patient's voice quality is personal and subjective. The diagnosis of voice abnormalities is based on history, physical examination, and supporting examinations. In determining the degree of Dysphonia disorder, we can use the voice handicap index. Voice Handicap Index (VHI) is one of the most widely used tools to measure the physical, functional, and emotional aspects of Dysphonia disorder.

1. Introduction

Dysphonia is a dysfunction in the ability to produce sounds characterized by hoarse breathy, qualities, or rough¹ Dysphonia is defined as a voice disorder characterized by changes in vocal quality, frequency, intensity, or effort that limit communication or cause a negative impact on sound-related quality of life through decreased self-perception in the individual's physical, emotional, social, or economic status.² Epidemiological studies by Aremu et al.,² on dysphonia ranged from 6–12% of children under 14 years of age and 3–9% of the adult population. The prevalence of dysphonia between age groups and occupations is different. The highest majority was recorded in the younger age group (21–30 years) because the younger age group was more ambitious, active, and used more vocals than other age groups. The prevalence of hoarseness is high among

housewives, singers, and teachers. Functional dysphonia is most common in young adults, and young adults are diagnosed with nodules and polyps.

In the diagnosis of dysphonia, assessing the patient's voice quality is personal and subjective. The diagnosis of voice abnormalities is based on history, physical examination, and supporting examinations. In the history, you can ask how the voice changes occurred, onset, other symptoms, and previous treatment. Other things that must be known such as excessive voice use, history of laryngeal surgery, and history of surgery with general anesthesia. Stomach-related symptoms such as heartburn, high stomach acid, and esophageal reflux can also be asked.¹⁻⁵ In assessing the degree of Dysphonia disorder, we can use the *voice handicap index*. *Voice Handicap Index* (VHI) is one of the most widely used tools to measure the



physical, functional, and emotional aspects of voice disorders.^{6,7} VHI is needed in determining the quality of life of people with voice disorders. Each aspect can have a value between 0-40, where 0 means no defects and 40 means maximum sound disability. In using the VHI, the patient is asked to answer every question related to his condition, ranging from 0 (never), 1 (sometimes), 2 (occasionally), 3 (often), to 4 (always).⁸ In the modified VHI, there are 10 questions which include whether voice disturbances cause other people to have difficulty hearing their voices, difficulty breathing when talking, the other person has difficulty understanding what the patient is saying when in a noisy place, variations in voice, the interlocutor does not hear when being called, decreased use of the telephone, requiring more effort to speak, avoiding groups due to noise interference, people around being disturbed by the patient's voice

and whether someone asks "what's wrong with your voice?".⁹⁻¹²

Voice Handicap Index (VHI)

The Voice Handicap Index (VHI) is one of the most widely used tools worldwide for measuring the physical, functional and emotional aspects of voice disorders. Initially, the VHI-30 was used in the assessment of voice disturbances. The VHI-30 can predict the occurrence of voice disturbances in asymptomatic high-risk populations, such as smokers and professional voice users. In 2004, VHI version 10 (VHI-10) was later developed. This version was found to be less time consuming, easier to administer in clinical settings, and statistically more robust than VHI-30.¹³⁻¹⁷

Table 1. Voice Handicap Index-10 (VHI-10)

1	My voice is difficult for others to hear	01234
2	People find it difficult to understand me in a noisy room	01234
3	This voice problem limits my personal and social life	01234
4	I feel left out in conversation because of my voice	01234
5	My voice problem causes I have lost my income	01234
6	I feel like I have to try hard to get my voice out	01234
7	The clarity of my voice is unpredictable	01234
8	My voice problems bother me	01234
9	My voice makes me feel disabled	01234
10	People ask, "What happened to your voice."	01234
	0 = never, 1 = almost never, 2 = sometimes, 3 = almost always, 4 = always.	

In 2004, a simplified 10-item version of the VHI (VHI-10) was developed, and this version was found to be less time-consuming, easier to administer in a clinical setting, and statistically more robust than the full-scale version. *Voice Handicap Index-10* is used to assess the impact of voice complaints on the patient's quality of life. The VHI is easy to self-administer and is quickly evaluated at the time of evaluation while maintaining its usefulness and validity of the VHI. VHI-10 score from 0 to 40.¹⁸⁻²¹

2. Conclusion

The Voice Handicap Index (VHI) is one of the most widely used tools to measure the physical, functional, and emotional aspects of voice disorders.

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