DEVELOPMENT A NEW LARYNGEAL PALPATORY SCALE (LPS) IN THE ASSESSMENT OF PATIENTS WITH MUSCLE TENSION DYSPHONIA AND STUDY IT'S PSYCHOMETRIC CHARACTERISTICS

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Abstract

Objectives: It sounds that laryngeal palpation is the more convenient, frugal, and accessible method to assess physiologic core traits such as, elevated laryngeal position and increased extrinsic laryngeal muscle activation in patients with muscle tension dysphonia (MTD). The aim of the reported study was to develop and validate a ''laryngeal palpatory scale'' (LPS), based on psychometric criteria, with the explicit goal of proving the instrument's high degree of (1) content and face ''validity,'' (2) interrater ''reliability,'' in patients' with muscle tension dysphonia (MTD).

Methods: The scale items was developed using an expert focus group and a literature review. Furthermore, Scale item generation and item reduction carried out by selection of 46 items during psychometric assessment of LPS's qualitative and quantitative content validity and qualitative face validity, which followed by interrater reliability. For this purpose, 531 patients were assessed and finally 55 patients with MTD and without evidence of laryngeal lesions or laryngeal neuropathology (26 women, mean age: 40.8 years, S.D: 12.5; 29 male, mean age: 41.6 years, S.D: 11.8) participated in the study. To assess the content validity, the content validity rate (CVR) and the content validity index (CVI), as well as the scale-content validity index (S-CVI) were calculated. A weighted kappa (k*) statistic utilized to examine the interrater agreement for each single item, as well as the total score interrater reliability was also assessed using an interclass correlation coefficients (ICC) among two rater. Moreover, the standard error of measurement (SEM), a measure of absolute reliability, was determined.

Results: In the phase of CVR assessment, 3 items obtained a score of less than 0.62, and were omitted. The rest of questions were assessed for CVI. The results of the CVI calculation formula showed that the I-CVI of all the items was greater than 0.79 and the S-CVI was equal to 0.96. Finally, the interrater agreement for all items included in the analysis was ICC = 0.97 (confidence interval = 0.95-0.98), suggesting almost perfect agreement.

Conclusions: The laryngeal palpatory scale (LPS) is a reliable and valid instrument for assessing patients with muscle tension dysphonia (MTD). However, future studies by the purpose of querying the concurrent validity of the new LPS is required.

Key Words: muscle tension dysphonia; laryngeal palpatory scale; validity; reliability.