How Do Individuals Cope With Voice Disorders? Introducing the Voice Disability Coping Questionnaire

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Summary: Coping is a key concept in psychological medicine, which refers to the way in which people deal with the stress of illness. Voice disorders may have pervasive effects upon the individual's life beyond the vocal impairment yet, there is little reference in current literature as to how people cope with voice problems. This study explored and validated the Voice Disability Coping Questionnaire (VDCQ), a newly developed disease-specific coping measure, which elicits how patients cope with voice problems. Eighty subjects presenting with muscle tension dysphonia (MTD) and adductor spasmodic dysphonia (ASD) completed a 28-item VDCQ as part of an initial assessment protocol before intervention, within a longitudinal study. Principal component analyses were used to investigate the underlying structure of this questionnaire; analyses of variance were used to determine group differences in coping strategies. The principal component analyses generated four coping subscales: "social support," "passive coping," "avoidance," and "information seeking" measured over 15 items. The subscales revealed logical correlations between them. Avoidance and passive coping were found to be used by the ASD group significantly more than the MTD group. This study provided initial evidence for the validity and reliability of the VDCQ; it differentiated between clinical groups and may facilitate a patient-centered approach, which enhances the understanding of voice disorders.

Key Words: Coping–Dysphonia–Spasmodic dysphonia–Voice disorders–Questionnaire.

INTRODUCTION

Extensive research has been carried out on the social and economic impact of voice disorders. Voice disorders may affect quality of life in several domains,[1–4] for example, dysphonic patients have revealed problems functioning at work and play.[1] The impact of voice disability is more wide ranging than simply restriction in voice. Having a voice disorder may limit the possibilities of employment and, in turn, income. Being restricted in the ability to communicate limits the ability to engage in social activities. Moreover, if voice disorders have a variable course they may require some adjustment; (eg, as with spasmodic dysphonia), yet little is known about the ways in which individuals cope with voice disorders.

For the purpose of this study, coping is defined as the individual's cognitive and behavioral efforts to manage the stress of illness. It is seen as a process not a goal[5] and the general aim of coping actions is to reduce the imbalances between demand by stressors and capacities of the individual.

The most frequently applied model of coping is the stress appraisal-based model laid out by Folkman[6] and Lazarus.[7] According to this model, coping is viewed as a response to specific stressful situations, where cognitive appraisals of potential threat function as a mediating link between life stressors and the individual's coping response. External demands refer to the event itself, whereas internal demands refer to the emotional reactions to the event. Coping is seen as a process during which thoughts and action directed at the stressor may coincide or alternate and give rise to emotional and behavioral consequences. Each response may produce effects that require further coping, for example, medical treatment may produce side effects that require further intervention, in addition to having an intended effect on the disease and/or the individual's emotions. The way patients cope with each aspect of their medical condition will have psychological, social, and physical consequences that could affect outcome.

Many approaches to coping have been dominated by the distinction between emotion-focused and problem-focused modes of coping. Problem-focused coping is aimed at directly solving the problem by changing the environment and thus reducing the impact of the stressful situation. Emotion-focused coping aims at dealing with the emotional consequences of the stressful situation through controlling emotions or discharging them.[7]

The relationship between three stages of the coping process; the primary appraisal, the secondary appraisal, and the actual coping strategy subsequently adopted, would seem to suggest that how individuals cope in certain situations is related to their personality. Thus, certain personalities will consistently be predisposed to adopt more effective coping methods than others; for example, individuals who exhibit type A behavior pattern are likely to display a bias for action and consequently adopt problem-solving behavior in the form of information seeking.[8] It is not clear, however, whether personality factors have a direct effect on coping; however, personality traits may influence coping indirectly through their impact on appraisal.

On the basis of research of other chronic diseases, it seems likely that psychosocial effects would be felt by individuals who have a chronic disease as they attempt to cope and adjust to a changed body image or to a permanent disability.[9,10] Studies of patients who survive cancer or have a permanent physical impairment indicate that there are major adjustments associated with lifestyle, related to social and family life, which are driven by patients' coping ability.[11,12] A recent systematic review has shown how coping behaviors are directly related to physical and functional outcomes of illness.[13] Coping has been seen as the important mediating link between the manner in which patients

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see their illness and the appraisals of health outcomes (patient beliefs → coping strategies → outcomes), with parallel processes for physical and emotional aspects of the illness situation.[14,15] A review of the relevant voice literature[16] revealed very little with regard to how people cope with voice disorders. The literature in speech-language pathology focuses on the effect of emotions on voice rather than on the effect of vocal disability on emotions, and/or the role of coping.[17–19] A great deal of research has also focused on outcomes of voice problems through clinical practices and the measurement of subjective outcomes, conversely, relatively little work had been directed toward the psychological mechanisms, which *mediate* the relationship between such outcomes and their psychological antecedent factors. By taking account of the mediating role of coping, it is likely that a clearer understanding of the diversity of outcomes with voice disorders may be achieved and appropriate interventions developed to improve outcomes.

A large number of self-report coping inventories have been developed; one of the most frequently used situation specific coping questionnaires is the Folkman and Lazarus' Ways of Coping Scale (1980).[20] The scale contains 66 questions, which are grouped into eight subscales that were derived through factor analysis. The internal consistency reliability of the scales was developed on populations of college students facing examinations, and married couples facing a variety of minor and major life stressors.[6,7] It is questionable whether the items developed with these problems are applicable to the study of voice problems with specific symptoms. Moreover, such questionnaires are rather long to complete in a clinical situation. It was therefore thought appropriate to develop a disease-specific measure that would allow clinicians to focus on known symptoms and selection of items, which would contain relevant problem-focused strategies for coping with dysphonia, in a shorter form. Such a clinical tool may be used at the onset of intervention to identify levels of utilization of adaptive and maladaptive coping strategies and hence guide intervention. A measure administered at the conclusion of an intervention may be used to track changes in strategies used.

The present study introduces the Voice Disability Coping Questionnaire (VDCQ), a scale developed for use in the clinical situation, through the description of its development.

The scale was developed using two different groups of dysphonic patients who presented with adductor spasmodic dysphonia (ASD) and muscle tension dysphonia (MTD). Spasmodic dysphonia is a nonprogressive condition but the intensity of symptoms varies considerably. The earlier diagnostic stages of the condition are difficult for patients and their families; although they are initially relieved to have a confirmed diagnosis, patients must come to terms with the impact of the condition on their lives, leading to a readjustment of prior patterns of social, vocational, and family interaction. A more specific task of coping with spasmodic dysphonia includes, where appropriate, adjustment to Botox intervention whereby some disability may be removed for a period, but symptoms return when the effect of the injection wears off. It could be therefore assumed that patients would use a variety of coping strategies ranging from seeking more information, talking to other patients, withdrawal, or acceptance. Conversely, the MTD group, which was the comparison group in this study, was expected to use different coping strategies, given the more "acute" and transient nature of their voice problem. Strategies useful for these patients may include emotion-focused strategies or methods such as denial and distraction to overcome the short-term stresses related to the illness condition.

METHODS

Design and participants

The subjects for the study were drawn from voice clinic referrals in one hospital. They consisted of 40 patients with ASD and a comparison group of 40 patients with MTD. The subjects were selected to the groups in the study on the basis of the following criteria: patients who were included in the ASD group had intermittent glottal closure spasms during speech, without evidence of laryngeal tremor or constant overadduction.[21,22] None had symptoms or a history suggestive of laryngeal trauma or other speech disorders, or neurological abnormalities. Patients were examined by a team, which included an otolaryngologist and a speech-language pathologist. They were evaluated with a standard case history and physical examination including fibreoptic video laryngostroboscopy. Patients were put through specific vocal tasks to permit observation for hyperadduction, tremor, inappropriate abduction, and spasmodic disruption of phonation. The MTD group included patients who presented with behavioral voice disorders with no changes in laryngeal mucosa. These patients have been evaluated by a team, which included an otolaryngologist and a speech-language pathologist, using a standard case history and physical examination, including video laryngostroboscopy. Patients with anatomic lesions or inflammations, for example, vocal nodules, were excluded.

Coping measurement protocol

Coping was assessed by means of the VDCQ (Appendix). Initially, 28 statements were generated for the VDCQ. The statements were constructed on the basis of interviews with dysphonic patients, existing coping scales, particularly the Ways of Coping questionnaire, and specific strategies suggested by expert panels of speech-language pathologists and laryngologists. Items were reviewed by members of the expert panel to identify ambiguous or poorly worded statements, assess face validity of the items, and to check their clarity. Appropriate changes were undertaken and the final questionnaire collated. For each coping item, patients were asked to indicate how often they adopt a particular approach to their dysphonia, using a six-point Likert-type format, ranging from "never" to "always."

Additional scales used for assessing the criterion validity of the coping questionnaire included the communication, work, and social interaction scales of the Voice Disability Questionnaire (VDQ)[23]; the internal, powerful others, and chance subscales of the Health Locus of Control (HLOC) Scale[24]; depression assessed using the Beck Depression Inventory (BDI)[25]; state and trait anxiety evaluated by means of the Spielberger State-Trait Anxiety Inventory (STAI)[26]; and trait self-