

Service Learning and Clinical Training in Voice

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Introduction

- In the context of a service learning project, undergraduate students assisted SLP graduate students in acquiring clinical skills in assessing and treating voice.
- At the same time, the undergraduate students received a clinical service of potential value to them as future professional voice users.

Introduction

- Graduate students served as clinicians teaching undergraduate students to perform Vocal Function Exercises (VFEs).
- These exercises have been found to be efficacious in improving vocal performance of both disordered and normal voice users (Stemple, 2005).
- Research with normal voice users, particularly singers and graduate students in SLP, has documented significantly improved performance on a variety of vocal measures following a 28 day period of daily practice.

Method

- Participants
 - Twenty female undergraduate students and 20 female graduate students in speech-language pathology
 - All were enrolled in voice disorders classes
 - All passed a hearing screening, were nonsmokers, and reported no history or current complaint of voice disorders or laryngeal pathologies.

Method

- The graduate clinician's role was to implement the Voice Diagnostic Protocol (Awan, 2001) and the Vocal Function Exercises (Stemple, 2005) accurately and reliably with their clients.
- The Voice Diagnostic Protocol (VDP) consists of a number of commonly used perceptual and objective measures of vocal performance.
- The Vocal Function Exercises (VFEs) are designed to strengthen and balance the vocal mechanism.

Method

- VFES include 4 types of exercises, consisting of sustaining a tone to warm up the system, slowly gliding from lowest to highest pitch, gliding from a comfortably high to lowest pitch, and sustaining a sequence of musical notes (e.g., C, D, E, F, G) as long as possible.
- All exercises are to be done
 - 2 times each, 2 times a day
 - as softly as possible, with frontal focus, and adequate breath support.

Method

- Prior to implementing the VDP and VFE procedures, the graduate clinicians received training to reach a criterion level of at least 90 % accuracy in performing and administrating the procedures in role-play practice sessions with a fellow graduate student.

Method

- The undergraduate client's role was to participate in 4 sessions involving the implementation of these procedures, to complete the assigned daily practice, and to keep a structured journal relating their experiences, thoughts and feelings regarding the procedures and their performance.

Method

- Each undergraduate client was randomly assigned to one of the graduate students and scheduled to meet with that clinician for 4 weekly sessions.
- In the initial session, the graduate clinicians administered the VDP and then instructed their clients in VFE.

Method

- During each of the 4 weekly sessions, clients performed each exercise 2 times each by matching the model on a CD recording and received feedback from the clinician in terms of their accuracy in performing the exercises.
- Clients were also expected to do each of the exercises 2 times each 2 times a day as homework and to record their performance on a daily log.

Method

- Graduate students were observed a minimum of 25 % of the time by certified speech-language pathologists experienced in the area of voice.
- Written feedback was provided to each clinician on her accuracy in administering, recording performance and providing feedback to the client.

Results

- A comparison of pre and post treatment performance of the undergraduate students indicated:
 - Significant increases in Maximum Phonation Times ($p=.000$) and Maximum Phonational Frequency Ranges ($p=.000$)
 - Significant decreases in Phonation Quotients ($p=.000$), indicating more efficient use of air during phonation

Results

- Supervisors' evaluations of graduate clinicians indicated that each of the graduate clinicians was independently and effectively implementing the VFE exercise program with their clients.
- Responses of the undergraduate students on their structured journal assignment indicated an overall favorable response to participating in this experience.

Results

- They reported that the experience was particularly helpful in teaching them more about their own voices and helping them to learn what it might be like to be a client.
- On a 5 point scale used to rate the experience relative to its value for their future schooling (1= no benefit and 5= highly beneficial), the mean response was 4.3, indicating that the undergraduate clients viewed the experience as mostly to highly beneficial.

Conclusions

- A service learning format appears to be an effective way to train graduate students in the implementation of evidence practices in voice assessment and treatment.
- Moreover, by replicating previous procedures used in evidence based studies of voice treatment procedures, students contribute to ongoing research on evidence-based practices.