



Outcomes of Student Learning: Use of an Online Training Module for SPEAK OUT!® for Parkinson's Disease



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BACKGROUND

Parkinson's Disease (PD) affects approximately one million people worldwide, oftentimes negatively impacting their communication; therefore their quality of life (Levitt, 2014). Few programs specifically focus on treating the voices of people with Parkinson's disease (PD) aside from the Lee Silverman Voice Treatment (LSVT). The Parkinson Voice Project (PVP, Dallas, TX) has created a speech therapy program called SPEAK OUT!® designed to preserve the voices of those with PD. Training for SPEAK OUT!® is done either in Dallas or on the PVP website using an online training module. This module includes videos on how to specifically implement SPEAK OUT!® voice therapy. This online training is now available to graduate student clinicians via a grant program by the PVP. Eastern Washington University Hearing and Speech Clinic was awarded a grant that made this training available for 2018-2019 academic year students.

There have been few studies that document the effectiveness of online learning specific to the field of communication sciences and disorders. However, Sitzmann et al. (2006) found that online learning builds declarative knowledge at least as effectively as traditional instruction. Krimm, Schuele, and Brame (2017) recently studied the effectiveness of an online course in phonetics for first year graduate students; findings indicated a significant difference on pre/post group means of knowledge of transcription after completing an online training module. Krimm et al. concluded that, "Using online learning to establish foundational knowledge frees class time for guided practice and clinical application, which may help students to develop more sophisticated clinical skills before embarking on independent clinical practice" (p. 57).

The purpose of this study was to determine if using the PVP's online training module is an effective way to educate students on the characteristics of PD and the skills necessary to implement SPEAK OUT!®

RESEARCH QUESTIONS

- Do SLP graduate student clinicians improve in their knowledge & skills of SPEAK OUT!® after completing an online training module?
- What are student perceptions regarding how well the online training module prepared them to implement the SPEAK OUT!® voice therapy program?

METHOD

Participants

A convenience sample of nine graduate student clinicians served as participants and were trained using the online module. Participants had been assigned to work with clients with Parkinson's disease but had not yet begun.

Materials

Training Module through Parkinson Voice Project. The module is comprised of 17 sections including: evaluation, documentation, reinforcement tools and follow-up programs cumulating in 10 hours of online instruction. Learning checks are embedded in the training.

Procedure



A multiple-choice pre/post knowledge test was developed based on content presented from the lecture and videos in the online training. A perceptual questionnaire was also developed to capture the experience of the graduate clinicians.

Measurement

Pre-test/Post-test: The test was comprised of 45 questions; 10 were specific to PD; 32 of these questions were specific to SPEAK OUT!® implementation; 3 questions were judged to address both knowledge and skill. The questions were multiple choice and true/false. Questions were developed by the researchers independent of learning checks. Tests were administered by a researcher to the nine participants in a group setting.

Perceptual Questionnaire: The perceptual questionnaire was administered at the end of the semester, after the students had participated in the training and worked with a client with Parkinson's disease in a clinical setting. The questionnaire included 6 questions, each of which contained a 5 point Likert scale beneath it that ranged from "don't agree, somewhat disagree, neutral, somewhat agree, agree." The questionnaire also included open-ended questions.

Example Question: This module prepared me to implement SPEAK OUT!® voice therapy
Don't Agree -----Somewhat disagree ----- Neutral ----- Somewhat agree -----Agree

RESULTS

Means and Standard Deviations were computed for SPEAK OUT!® results across conditions and test question type (See Table 1). The two test conditions were compared using a paired samples t-test.

Table 1. Student knowledge & skill mean (SD) of number of questions correctly answered

	Knowledge Questions (13)	Skill Questions (35)
Condition One (Pre-Test)	8.33 (2.24)	20.78 (3.80)
Condition Two (Post-Test)	11.56 (1.01)	34.44 (33.28)

Significant differences were found pre-to post-test for knowledge of PD $t(-7.248)=8, p>.002$ and knowledge of SPEAK OUT!® implementation skill $t(-4.347)=8, p>.002$.



Participant responses on the perceptual questionnaire regarding the value and ease of the online training module were positive. Participants believed that the online training was helpful in teaching the characteristics of PD and preparing them to interact with people with PD, though they indicated they would have benefitted from more training on PD specific to characteristics and progression of the disease. Participants also indicated that a full SPEAK OUT!® treatment session in the module would also be valuable.

DISCUSSION

Findings support those of both Sitzmann et al. (2006) and Krimm et al. (2017) as significant improvement in knowledge scores pre/post test on characteristics of PD and SPEAK OUT!® were found supporting students declarative knowledge for this treatment and building their clinical skills. This implies that using the SPEAK OUT!® online training module is an effective way to clinically educate graduate student clinicians.

Clinical Education Implications and Limitations

This online training resulted in decreased 1:1 pre-clinic training for students assigned to SPEAK OUT!® by as much as eight hours (Nicholas, 2019). Additionally, students could refer back to the training for one month post and have access to Clinical Resources on the PVP website and weekly Facebook chats for providers. Given that the participants were first year graduate students, there was a need to supplement the online training with education re: medication effects, hearing, overall health, and DBS surgery effectively making this clinical training approach hybrid in nature.

The researchers were not trained in test construction, therefore the questions may have been too difficult or too easy. Next steps included measuring the training effects on more participants and randomizing the sample with some receiving the training module and others receiving training from a clinical educator. A study could also examine the effectiveness of the training module outside of a graduate program with certified clinicians.

SELECTED REFERENCES

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