

Efficacy of the PROMPT System of Therapy for the
Treatment of Acquired Apraxia of Speech
(Abstract)

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The PROMPT system of therapy is a dynamic tactile-kinesthetic, oral-facial cueing system designed for the treatment of motor speech disorders (Chumpelik, 1984). For each phoneme in the English language, a PROMPT is delivered which signals to the patient jaw height, tongue elevation, oral-nasal contrasts, voice-voiceless contrasts, place of articulation, segment duration, and segment tension. Because PROMPTs are delivered dynamically, suprasegmental cues regarding speech production are afforded the patient with regard to rate control and transitionalization. PROMPTs have previously been found to be efficacious in the treatment of developmental apraxia of speech (Chumpelik and Sherman, forthcoming).

In the present investigation, the PROMPT system of therapy was administered to one adult patient with severe chronic apraxia of speech and moderate Broca's aphasia. Multiple-baseline data for production of eight phrases and 13 pairs of minimally-contrasting words were obtained over 21 treatment sessions. All stimuli were probed thirty times each the first three days using repetition. In addition, all but the PROMPT-trained phrases were probed thirty times each during each subsequent session using repetition plus integral stimulation (i.e., "watch me, listen to me, say what I say").

Results regarding production of PROMPT-trained phrases indicated that the patient generally achieved a 90-100% accuracy of segment productions for all segments within a phrase within approximately four training sessions. Accuracy of production of phrases which were elicited using integral stimulation hovered around 0%. Similar results were obtained for PROMPT trained and untrained, but integrally-stimulated, minimally-contrastive word pairs.

Generalization of treatment was demonstrated by improved intelligibility scores as derived from the Assessment of Intelligibility of Dysarthric Speech (Yorkston and Beukelman, 1981). During intensive training, intelligibility scores based upon transcribed judgments improved from 13% to 27%. Over a five-month period in which monthly maintenance therapy was given, intelligibility dropped to 18%. Results indicated that PROMPTs may be efficacious for teaching both motor plans as well as motor programs (Marsden, 1982) to patients with apraxia of speech in combination with aphasia.

REFERENCES

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DISCUSSION

- Q: Because you had two simultaneous treatments going on, you contaminated your results. You should have used an alternating treatment design, since your integral stimulation probably facilitated the results you obtained from your PROMPT treatment.
- A: In fact, our design was weakened because we administered two types of treatment simultaneously. However, we felt that our investigation would have been even more contaminated had we used an alternating treatment design on linguistic stimuli which may have been inherently different for this patient. Since this patient was aphasic as well as apractic, we did not know how to equate the phrases for linguistic difficulty, personal preference, premorbid style of speaking, or this patient's motoric ease of production. Further, it is obvious from our probed stimuli that we did not get fluctuations in this expressive patient's behaviour when using integral stimulation; that is, stimuli did not improve until PROMPTs were delivered. Had our data not been this clear and free from fluctuation during the integral stimulation sampling then we could not have stated that, in fact, PROMPT probably was the superior method of treatment for this patient. We would not have known whether it was PROMPT or the facilitating effects of the integral stimulation. It seemed to us that we had two options: 1. weaken the design by administering two treatments as such; or 2. risk administering nonequatable linguistic stimuli under alternating treatments design and not whether it was the linguistic or the motor components or the treatments which were making the difference.
- Q: Isn't this the Sara Stinchfield-Hawk method?
- A: No, it is not the same method, although it is based upon the same principles. First, for most phonemes, the Chumpelik PROMPTs are different from the Hawk cues for most phonemes, and second, the present method is totally dynamic and can be applied to utterances (discourse) which are indefinite in length.