

INTRODUCTION

Prosody is often referred to as the rhythm and melody of speech. Prosody allows us to communicate emotions and attitudes in our utterances, mark the most important parts of messages, indicate a question or statement, and more, all without adding additional words. Without the appropriate use of prosody, a person's speech may present as monotone, robotic, or overly dramatic. Some individuals have difficulty understanding others' use of prosody. As a result, they may not be able to determine from a speaker's voice how the person feels or when the person is being sarcastic. Like many aspects of speech and language, skill in prosody is often taken for granted. In fact, this may be truer in the case of prosody than other skill areas because of its subtlety. Nevertheless, many individuals with speech and language disorders have difficulty with comprehension or production of prosody, or both. Such populations include individuals with autism spectrum disorder (ASD), apraxia of speech, Williams syndrome, Parkinson's disease, and other disorders (Odell & Shriberg, 2001; Peppé, 2011).

Researchers studying the development of prosodic skills indicate that although aspects of intonation comprehension develop throughout childhood, 5-year-old children have largely mastered most functional aspects of prosodic expression (Wells, Peppé, & Goulondris, 2004). There's great variability in how and when individuals acquire prosodic skills; however, it's clear that many individuals with disorders, such as ASD and apraxia of speech, don't fully develop prosodic skills on their own (Odell & Shriberg, 2001; Peppé, 2011). As with treating any aspect of speech and language, early intervention is greatly beneficial to individuals who have difficulty with prosody. A systematic review of the literature in prosody interventions (Hargrove, Anderson, & Jones, 2009) indicates that although there's a shortage of empirical research into the efficacy of treatments targeting prosody, the existing evidence clearly shows that behavioral interventions are effective across a variety of disorders.

Methods for treating deficiencies in various prosodic skills are described in the literature. Additionally, there are some familiar protocols that use techniques to develop prosodic skills. These include Dynamic Temporal and Tactile Cueing (DTTC) for Speech Motor Learning (Strand, Stoeckel, & Bass, 2006), Melodic Intonation Therapy (MIT) (Sparks & Holland, 1976), and Lee Silverman Voice Treatment (LSVT) (Ramig, Countryman, Thompson, & Horii, 1995), among others. However, there's currently no single comprehensive resource for treating both receptive and expressive prosodic skills. I've attempted to fill this gap with the *Prosody Treatment Program* by providing exercises to train clients in fundamental prosodic skills, both receptively and expressively.

Note About Using the Audio CD

The audio CD included with this program contains audio files that you can use with the client to present specific activities. However, once you're familiar with how to model the targeted prosodic patterns, consider producing the stimuli yourself for the client. This way, the client can benefit from hearing the natural variability that occurs in spontaneous speech.

Joe

TARGET AREAS

The *Prosody Treatment Program* is divided by age into two sections: Preschool and School Age.

SECTION 1: PRESCHOOL

Since many aspects of prosody are still developing and are highly variable in children under 5 years, it's difficult to diagnose a prosody disorder in preschool-age children. However, research indicates that children with certain diagnoses, such as autism spectrum disorder (ASD) and childhood apraxia of speech (CAS), are at risk for not developing appropriate prosodic skills. Thus, it's prudent to incorporate practice of basic prosody skills with the preschool population. The activities and ideas on pages 8-25 are appropriate for working with children ages 3-5.

SECTION 2: SCHOOL AGE

This section includes a *Prosody Screening Test* to use when you work with clients ages 5-18. It also provides instruction and practice activities for improving prosodic skills in the areas of loudness, pitch, and rhythm. The clinician instructions for each activity give you a quick overview of the activity and indicate materials you need, such as an accompanying worksheet or track on the enclosed CD. The client directions for each activity provide the script for you to say, explaining what you want the client to do. Many students need repetition in order to master a skill, so you may choose to have the client repeat these activities and the included homework activities until you feel he is ready to progress to the next section. You may also modify the stimulus items to create varied learning opportunities.

■ PROSODY SCREENING TEST (pages 28-31)

The test is divided into seven areas:

- Loudness
- Word Stress
- Syllable Stress
- Question Inflection
- Emotions
- Sarcasm
- Chunking

Use the screening test and the accompanying audio CD (track 5) to establish baseline data for your clients, write treatment goals, and measure progress. The screening test isn't standardized and shouldn't be used to diagnose a speech and/or language disorder.

■ LOUDNESS (pages 33-61)

A speaker's ability to control the loudness of his voice is important on two levels. Socially, it's important to know how loud your voice should be relative to your location (e.g., library vs. playground), proximity to your conversational partner, and the nature of the conversation (e.g., private vs. public information or comments that could hurt someone's feelings/reputation). Additionally, loudness adjustments can change the meaning of individual words (e.g., **produce** vs. **produce**)* and place focus on key words in a phrase (e.g., "I'd like a **green** apple"). These adjustments are often subtle, but they influence the meaning of a speaker's message in significant ways.

* The activities in the *Prosody Treatment Program* use the model of Standard American English. Due to regional differences in dialect, acceptable pronunciations of some words may differ (ex: **umbrella**, **police**, **guitar**).

■ **PITCH** (pages 62-75)

A speaker uses pitch changes to convey whether he's asking a question, making a comment, or giving a command. Pitch changes also give listeners clues about how the speaker feels. If a speaker is happy or excited, his voice may be higher in pitch or may sound more "musical." On the other hand, a person who's sad or bored may speak using a voice that sounds lower in pitch or flat and not very musical. He may also speak a bit slower. The absence of such appropriate variations can result in speech that sounds robotic and/or unnatural. It may also result in the speaker missing an opportunity to add information to the message he's communicating.

■ **RHYTHM** (pages 76-87)

Rhythmic components of speech include speaking rate and chunking. A slow speaking rate may sound dreary, uninspiring, or labored. A fast speaking rate may make someone difficult to understand or be perceived as hyperactive. *Chunking* refers to how a speaker groups words and phrases together. Between each "chunk," the speaker may pause slightly to let his listener know where one word, phrase, or sentence ends and another begins. These are important for helping listeners understand the meaning of what a speaker is saying.

■ **HOMEWORK** (pages 88-97)

Send these pages home with the client to provide additional practice with a specific skill area.

Note About Providing Cues

Using a systematic approach to providing cues can help accelerate the client's learning of the prosodic skills targeted in this program. The following hierarchies of cueing levels are for receptive and expressive tasks. You may modify them as needed, depending on the skill and the client's needs. Begin at the level of most independence (level 4 for Receptive Tasks, level 5 for Expressive Tasks). If the client is unsuccessful at these levels, move back one step on the hierarchy until the client is successful. Once he's successful at one level, progress one step at a time toward increased independence. Expressive task cues are adapted from the Dynamic Temporal and Tactile Cueing (DTTC) for Speech Motor Learning hierarchy (Strand, Stoeckel, & Baas, 2006).

• Receptive Task Cues

1. Model the utterance with slightly exaggerated prosody and gesture cues while the client watches your face.
2. Model the utterance with slightly exaggerated prosody while the client watches your face.
3. Model the utterance with natural prosody while the client watches your face.
4. Model the utterance with natural prosody without the client watching your face.

• Expressive Task Cues

1. The client says the utterance in unison with you.
2. The client repeats the utterance while watching your face.
3. The client repeats the utterance without seeing your face.
4. The client repeats the utterance without seeing your face, after a 2-3 second delay.
5. The client says the utterance independently.