



# *Thinking in Speech*<sup>®</sup>: Developing Independent Problem-Solving and Emotional Self-Regulation in Autistic Children

**Presenters:** Janice Nathan, M.S., CCC-SLP & Barry R. Nathan, PhD

Most therapies for autistic children focus on teaching specific scripts for what to say or do. These children learn to memorize the scripts, but not how or when to adapt them to new situations. But since life is filled with new situations, these children are unable to adapt their scripts. *Thinking in Speech*<sup>®</sup> (*TiS*) is different. This therapy first helps children learn to understand when they're starting to feel uncomfortable or anxious in a situation, and then how to independently talk themselves through a problem — to cope on their own with a new situation that might cause them stress.

## Description of Clinical Intervention

The *voice in our head* is how we think. Using this inner voice is how we solve problems and is foundation for effective self-regulation. Autistic children struggle with this. In *Thinking in Speech*, therapists help children with autism to: 1) recognize pre-cursors to feelings of stress when faced with a problem, 2) learn, practice and apply new problem-solving strategies in situations that create stress; and 3) verbalize the strategy — first to the therapist, but eventually to themselves! Over time, the child becomes the “*boss of my brain*” and can solve problems and cope in stressful situations without help from parents, teachers, or caregivers. *Thinking in Speech* is grounded in research in neuro-cognitive development, brain imaging, and traumatic brain disorders.

## Advantages

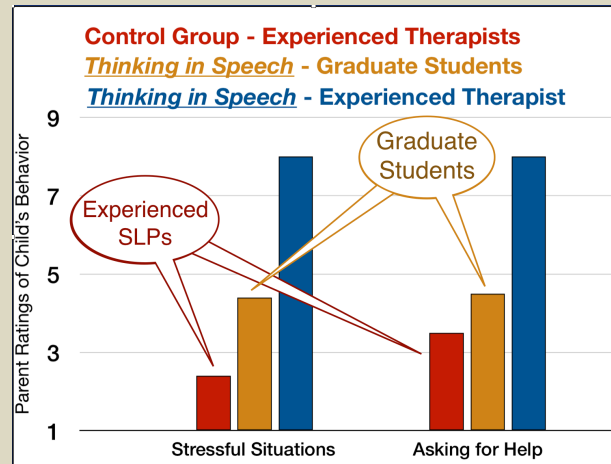
- ✓ Only intervention that helps children recognize how their bodies feel when they are faced with situations, they deem stressful or challenging.
- ✓ An intervention that focuses on helping children adapt to new situations, not merely memorize rules or scripts
- ✓ Only known intervention designed to develop “inner speech” — the voice in our head we use to think through problems
- ✓ Results generalize from therapy room to home, school, and other social situations.

## Applications

The ability to “think in speech” is critical for flexible behavior and cognition, and is the foundation for effective self-regulation. *Thinking in Speech* is used for developing and applying a wide range of cognitive skills:

- ✓ Comparing and contrasting
- ✓ Asking for help
- ✓ Applying emotions vocabulary
- ✓ Using previously learned knowledge
- ✓ Making choices.

*Thinking in Speech* can be used to help preschoolers, young children, teenagers and adults.



*TiS*-trained SLP-graduate students outperformed experienced SLPs without *TiS* training.

## Stage of Development

*Thinking in Speech* has evolved over 20 years of professional practice by Janice Nathan, a certified speech-language pathologist. She has refined her intervention with over 100 clients, including pre-schoolers, young children, teenagers, and young adults, from diverse social backgrounds.

## Status

The *Thinking in Speech* trademark is registered with the US Patent and Trademark Office.

## Notable Mentions

Janice Nathan grew up with a brother and parents who were autistic.

Janice has presented 1 & 2 day workshops throughout the United States and in Cairo, Egypt.

*TiS* earned a 2020 Pitt Innovation Challenge (PInCh) award from the Univ. of Pgh Clinical & Translational Science Institute.

As a result of *TiS*, Janice and Barry Nathan participated in the NSF-funded 2019 Pitt Ventures First Gear program of the Univ. of Pgh Innovation Institute.

Additional information can be found in *Building Reasoning and Problem-solving Skills in Children with Autism Spectrum Disorders: A Step-by-Step Guide to the Thinking in Speech<sup>®</sup> Intervention* (2018), published by Jessica Kingsley Publishers of London/Philadelphia, 192PP.