



TSI – Targeted Sound Intervention®

National Association for Child Development®

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REPORT OF DATA

TSI: FOCUSED ATTENTION PROGRAM

BACKGROUND

NACD's TSI – Targeted Sound Intervention® includes programs that target very specific aspects of auditory processing. TSI: Focused Attention is a program that addresses the skill of auditory figure-ground processing. Auditory figure-ground processing refers to the ability to tune in to and process a specific auditory stimulus in the presence of background sound. For many individuals that we see at NACD—from young children with developmental issues to school-aged children in classrooms to older adults with mild hearing loss due to aging—this skill is critically important and particularly difficult.

TSI: Focused Attention contains a series of sessions of increasing difficulty where music (the primary stimulus) is set against a backdrop of environmental noise (random input). With the help of a listening partner and proper listening techniques, the listener learns to attend to the music and to filter out the distracting background.

TSI: FOCUSED ATTENTION TEST

To aid parents in assessing change that occurs with the Focused Attention program, NACD developed a speech-in-noise pre and post-test to be used in conjunction with the program. The test is an informal measure that provides a comparison of a child's ability to recognize and repeat speech-in-noise before and after going through the program. It has not been standardized and is in no way intended to be diagnostic. In the test CD speech and background noise are presented at approximately the same volume levels and the listener must repeat what he/she heard spoken.

We offer this pre and post comparison to NACD families at no charge. Children must be at a functional level that allows them to follow directions and to repeat words. Therefore not every child who uses TSI: Focused Attention is able to complete the pre and post-tests.

Because this test is not standardized, only raw scores are reported. The current analysis is of the raw scores and parent ratings.

[Note: The results of a filed study conducted with a demo CD of Focused Attention prior to its release are reported in a separate document on our website.]

CURRENT REPORT-8-18-11

This paper is a report of the statistical analyses of the first 28 individuals who have completed both the pre and post-tests. We will update the information as we continue to collect more data. Once we have a larger sample, we will be able to provide additional data, such as results by age and by diagnostic groups (ex. autism, ADHD, etc.).

PARTICIPANT GROUP

The 28 individuals who completed pre and post-testing in conjunction with using TSI: Focused Attention ranged in age from 6 to adult. The group included individuals with specific diagnoses of ADHD, developmental delays, autism, and sensory integration dysfunction. Some individuals had no diagnosis but were reported to be easily distracted or to have difficulty with figure-ground processing.

RESULTS

Note: The results of this analysis are discussed in terms of statistical significance. If a result is found to be “statistically significant,” this means that the change that occurred was not likely simply to occur by chance. The level of statistical significance describes how likely it was that it happened by chance. For example if we report that a result was significant at the .05 level, this means that in 5 out of 100 cases, this change (result) could have happened by chance. Likewise being significant at the .01 level refers to 1 out of 100 times could have been by chance, and the .001 level means 1 out of 1000 times. If a result could have occurred by chance more than 5 out of 100 times, that is no longer considered to be “significant.”

When we look at the total raw scores for all 28 participants, the mean (average) score on the pre-test was 19.81, and the mean on the post-test was 23.96. This is an increase of 4.15. This increase is significant at the .001 level, meaning that it was highly significant.

For the subtest in which listeners simply repeated the single words that they heard spoken in noise, mean raw scores increased from 41.86% correct to 51% correct, again significant at the .001 level.

For the subtest in which listeners answered questions that were spoken in noise, mean scores increased from 71.33% correct to 82.67%. This was significant at the .05 level.

In addition to the speech-in-noise portion of the test, parents were asked to rate their child’s skills in three areas. Ratings were on a scale from 1 to 10. At the time for the post-test, parents were not reminded of how they had rated their child on the pre-test.

Question #1 on the rating scale asked how the parent rated the child’s ability to tune in and listen in general. Average ratings for this question increased by one full point, a result that is significant at the .01 level.

Question #2 asked the parent to rate the child’s distractibility. Ratings increased by 1.46 points, meaning that distractibility decreased after using the program. This was found to be significant at the .001 level.

Question #3 asked parents to rate the child's ability to listen and attend in the presence of background noise. This is the skill that we are directly addressing with the Focused Attention program. Ratings for this question increased by 1.63 points, also significant at the .001 level.

DISCUSSION

Although our total sample is currently limited (N=28), we are pleased with the results our clients have experienced with TSI: Focused Attention. Both the changes in the test scores and the parents' perception of change increased by an amount that was found to be greater than what would be expected by chance. In most cases, changes were considered highly statistically significant.

We should also mention that many more individuals have used the program than what is represented here. Many families declined using the test, and many children were simply not at a functional level to where they could participate in the testing. The changes that we have seen overall with our clients are consistent with what is represented here in the current report. There have also been many individuals who have taken pre-tests and not yet had post-tests. As the database grows we will continue to update our information for you.

[For more information regarding the National Association for Child Development (NACD), please visit the NACD website at www.nacd.org.]