# A Study to Establish Whether the Use of The Listening Program<sup>®</sup> is Effective in Improving Auditory Skills for Children with Autism

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#### INTRODUCTION

A support group for parents of children on the autism spectrum in Northern Ireland provided the twelve children for this study. The ages of the children ranged from five years eight months to twelve years four months, and all were diagnosed with autism. They were tested using the Scan Test C, which is a test for auditory processing disorders in children; both before and after the use of The Listening Program® from Advanced Brain Technologies. They listened, through headphones, to the specially modified music of TLP Level One for half an hour a day, over a period of ten weeks. Parents completed a questionnaire after the children completed the ten week schedule.

#### **OBJECTIVE**

The study was developed to determine the effectiveness of The Listening Program® (TLP) on improving auditory skills for children with autism.

#### **METHODS**

The **Scan-C** test was used to assess how accurate each child's perception was in various aspects of listening.

Filtered words are words presented without background noise. Extraneous noise may distract the attention of the child so the child does not perceive the word presented accurately. This will be disturbing in a quiet situation where there are always isolated noises; such as other children shuffling, pages being turned, doors opening or closing etc.

Auditory figure ground is words presented with background noise. Children may score better in this test, as continuous background noise may be easier for them to block out, and with it the other extraneous noises can be masked.

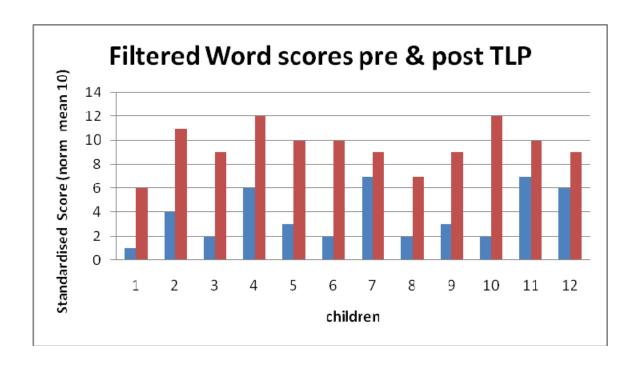
Competing words is two words presented at the same time. The child has to repeat both words. This improves with maturity of the child.

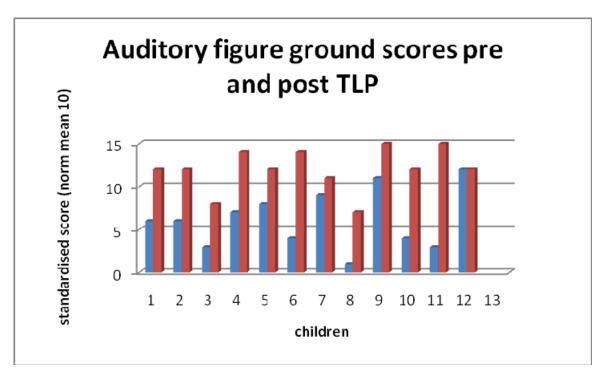
Competing sentences is two sentences presented together but only one has to be repeated. The children can use context to help them get the appropriate words or produce a sensible sentence.

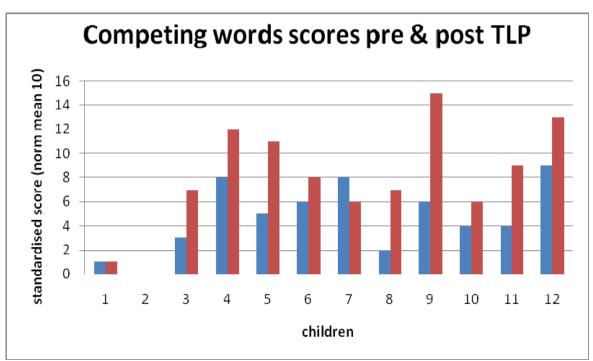
The raw score is the number of correct responses.

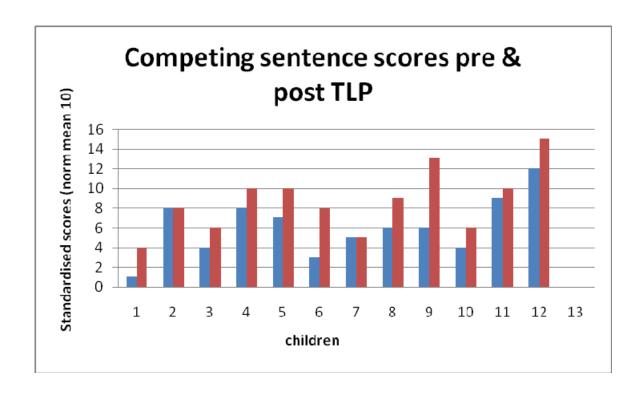
This is converted to a standard score between 1 and 20, which indicates the position of that score relative to the population of this age range. (mean 10) The confidence range indicates that you can be 95% confident that the individual's true score lies within this range.

#### **RESULTS**

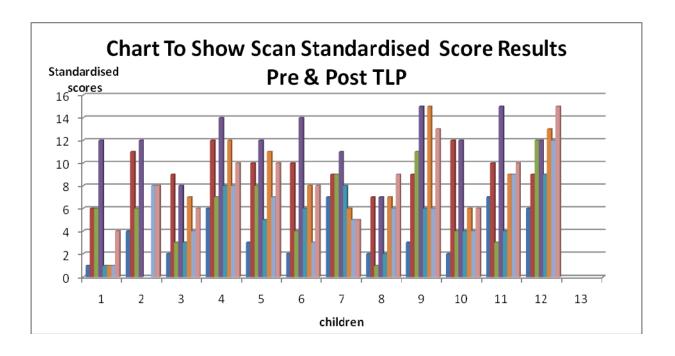


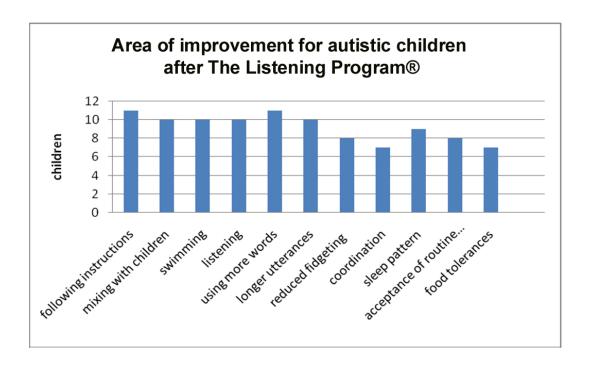






### **CUMULATIVE RESULTS**





Child 2 was distressed by the competing word test so that was not completed.

Child 7 might appear to have gone down but her raw scores went up. She went up an age range for scores.

The parents completed the questionnaire based on their experience of the child's progress. Not all of the children had difficulties in all the areas.

#### CONCLUSION

All children improved on filtered words. Only one did not improve on auditory figure ground, but that child was already above average in this area.

All but one of the eleven improved on the competing word test.

Ten out of twelve improved on the competing sentence test.

Improved auditory skills can only be beneficial to children. Even without more statistical data I believe this small study shows clearly that the use of The Listening Program from Advanced Brain Technologies is of benefit to some children on the autism spectrum.

It is important to note that the children listened for only one half of the recommended schedule. They listened to one cycle, or ten weeks; while the usual recommended program length is two ten week cycles, or a total of fifty hours of listening.

I would like to thank all those children and parents who took part in this study.