



Research on the Tomatis Method

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1. Meta Analysis on children with learning and communication disorders.

Dr. Tim Gilmor published a peer reviewed Meta Analysis in the International Journal of Listening (Vol. 13, 1999 12-23) based on five research studies involving 231 children with learning and communication disorders. The Meta Analysis combined 1) his own two year study of 102 children and adolescents at the Tomatis Center in Toronto, 2) a one year study of 25 children with learning disabilities ages 9-14 by Dr. Byron Rourke of University of Windsor, Ontario, 3) a nine month study of 26 language impaired preschool children by Dr. Barbara Wilson of the North Shore University Hospital in Ontario, 4) a study of the progress of 32 underachieving children ages 8-12 by Dr. John Kershner of the Ontario Institute for Studies in Education and 5) a two year study of 46 boys with severe dyslexia, ages 10-15 by Peter Mould, Chief Remedial Teacher of Brickwall House, East Sussex. Positive effect sizes were found for each of the 5 behavioral

domains listed: Linguistic, psychomotor, personal and social adjustment, cognitive and auditory skills.

2. Tomatis Center, Canada – Studies on effects of Learning and Communication Disorders

a.) The Tomatis Center in Toronto, Canada, studied the results of Tomatis Listening Therapy on over 400 children and adolescents, 95% of parents saw positive response in their children as follows: 89% greater communication abilities, 86% better attention span, 80% frustration level decreased, 74% quality of speech improved, 73% memory improved, 69% better spelling aptitude, 84% showed more maturity. Six months after the program, 83% of those children had maintained the improvements and/or had continued to make even further gains. An additional 14% of the children had maintained some of the gains. Only 3% had maintained none of the improvements. (Sollier, 2005)

b.) The Tomatis Listening Program produces benefits beyond what could be expected by maturation or remedial education alone. Research by H. A. Stutt in 1983 concluded a significant increase in I.Q., better reading skills and perceptual processing, increased academic skills, a general sense of adjustment, more developed communication skills and a greater ability to verbally express thoughts and feelings. (Sollier, 2005)

3. Increasing Mental Age in Inmates – De Bruto (1983)

A carefully controlled empirical investigation by De Bruto in 1983 studied inmates with developmental delay ages 4-14. Thirty participants were divided into these 3 groups. Group 1 received Tomatis auditory stimulation and a sensory motor stimulation program. Group 2 received music stimulation, without the Tomatis effect, plus the same sensory motor stimulation program. Group 3 received no treatment. The results indicated that Groups 1 and 2 both had an increase in mental age but the increase in Group 1, the Tomatis stimulation group, was significantly higher than Group 2. Group 3 had no change. A statistically significant reduction of self-directed responses, together with a significant increase in object-directed responses, occurred after the Tomatis stimulation. (Sollier, 2005)

4. Study on children in Psychiatric Clinic – Stromstad, Sweden (2002-2007)

A five year pilot project was implemented at a psychiatric clinic for children and youth which is a part of the Public Health and Medical Services System in Stromstad, Sweden. Ula Staf, psychologist and Tomatis consultant, had found that more and more children are anxious, hyperactive and have big learning difficulties. A number of these children are diagnosed as having ADHD. Part 1 of the study, 2000-2002, integrated the Tomatis Method with Feldenkrais methods, also known as “awareness through movement”; to see if this could help 26 children with hyperactivity and concentration

problems. Post intervention results include seven students who no longer needed an assistant in school since they were able to manage the classroom situation much better. They have also become interested in learning and made great progress. Early results of Part 2, a follow-up parent questionnaire, indicated that children after the intervention had better ability to concentrate and better ability to have good relations with their parents and other children. Also their behaviour and social ability had much improved. (Staf, 2005)

Further analysis of the results of Part 1 indicate a 25% overall improvement in areas of attention, motor skills, expression, energy level, behaviour and social capacity and were highly statistically significant. The follow-up questionnaires 2004-2006 were used to see if these results would hold after 3-4 years. A 32% overall improvement was found since prior to intervention and again results were highly statistically significant. Results had continued over time. All parents interviewed were positive and would do it again. (Staf, 2007)

5. Study related to Auditory Processing Disorder – Deborah Swain

An Auditory Processing Disorder (APD) is not a hearing impairment or linked to hearing loss but rather is a difficulty with processing sounds appropriately and the failure to process the meaning of sounds or verbal communication. APD can be present from an early age and can lead to difficulties in child development. This consequently leads to a difficulty in comprehension and expressing oneself. This disorder is linked to a dysfunction in decoding language, difficulty with comprehension and expressing oneself. It tends to isolate the child from his/her peers and his/her environment (Nicoloff, 2007).

A retrospective study by Deborah Swain evaluated the results of Tomatis auditory stimulation on 41 randomly selected clients that had auditory processing disorder. Results were pre and post tested using the Test of Auditory Perceptual Skills (TAPS) and Token Test for Children (TTC). Results of the research indicate that the Tomatis Method significantly improves immediate auditory memory, auditory sequencing, interpretation and following directions, auditory discrimination and auditory cohesion and reductions in auditory latency. (Sollier, 2005)

6. Results of Tomatis Training on Autism – Martha Mack, Listen and Learn Centre (2007)

Children with autism often have atypical auditory processing such as hypersensitivity– pain or discomfort with sound and hyper acuity– hearing sounds too well or too loudly. To handle these uncomfortable perceptions they may withdraw, disengage from their auditory world or they may produce sounds that they're system can handle–auditory self-stimulation. Behaviors of children with autism include: covering ears, running from a sound, crying, tantrums, self-injurious behavior, tuning out or withdrawing. Their language impairment may, in part, be due to poor synchronization with and between cortical language processing regions. (Mack, 2007)

According to Martha Mack, founder of the Listen and Learn Centre, Tomatis results for children with autism include normalized sensitivity to sound, reduced tactile defensiveness, higher tolerance for different textures of food, clothing, etc.; greater attentiveness for visual acuity and auditory stimuli. Language development can include improved comprehension and speech and increased experimentation with own voice, increased length and complexity of sentences and greater desire to communicate. Social behavior can include increased positive interactions with others, greater affection and willingness to be around people. More frequent initiation of contact and communication; improved eye contact and less aggression in interactions. Positive change in personal well being can include more flexibility in routines, reduced repetitious behaviors, fewer tantrums and less injury to self. (Mack, 2007)

7. The Tomatis Method with severely autistic boys: Individual case studies of behavioral changes – Neysmith-Roy, Joan M., South African Journal of Psychology, 00812463, 20010301, Vol. 31, Issue 1

Six severely autistic males ranging in age from 4 years to 11 years received the Tomatis Method to assist in alleviating the severity of behaviors contributing to the diagnosis of Autism. Three of the 6 boys demonstrated positive behavioral changes by the end of treatment. One boy was no longer considered to be autistic, two boys showed mild symptoms of autism, while 3 boys remained in the severely autistic range. 5 of the 6 boys indicated significant change in pre-linguistic areas as rated by the Children's Autism rating Scale (CARS) and frequent video samples of the 6 boys throughout the intervention. These included Adaptation to Change, Listening Response, Non-verbal Communication, Emotional Response and Activity Level.

8. Autism Study on 100 children – Davis-Kalugin 2005

Another study on autism reviewed changes noted by parents of 100 children diagnosed with autism, ages 3-21, who received basic Tomatis training of 60 hours of listening. All 100 children demonstrated that the Tomatis Method was an appropriate intervention to support positive change. Parents were asked to complete an "Abilities to be Improved" pre treatment form and an "Abilities Improved" post treatment form. The forms included 102 possible changes in 12 areas. Change was noted in every area as follows: 87% made change in Interpersonal Growth, 85% in Listening and Speech, 81% in Academic Achievement, Thinking, Learning, 80% in Attention, 79% in Behavior, 69% in Intrapersonal Growth to Know and Express Self, 66% in Movement, Sports, and Rhythm, 63% in Musical and Vocal Skills, 54% in Relaxation, 49% in Creativity, 39% in Reading, Writing, Spelling, and 20% in Well-Being. According to Doreen Davis, children with autism typically need many more sessions beyond the original 60 hours used during this study. Therefore, the changes noted in the post session "Abilities Improved" form, are indicative of only the beginnings of change for these children. Additional sessions of the Tomatis Method were suggested. (Davis-Kalugin, 2005)

9. Tomatis in Schools – Wilson Academy Phoenix, Arizona

The effectiveness of the Tomatis Method of Listening Training in improving auditory processing, pre-reading skills, and classroom behavior in normal K and 1st grade children, was researched using a double-blind, placebo control group, random assignment research study. The program of stimulation was fit into the normal school curriculum at the Wilson Academy in Phoenix, Arizona. Children were divided into a Tomatis listening therapy group and a placebo control group (PCG). The Tomatis group showed more improvement than the PCG on all of the variables at the Post-test time. It was not, however, significant. (Andrews, Thompson & Trumps, 2005)

10. Project Winnie – Columbia – Helga Lopez Vasquez (2006)

A school project in Colombia researched the effects of the Tomatis method on the development of young children. A four year study, “Project Winnie”, conducted research in a nursery school using 5 groups of 12 children, 3 yrs old. Prior to implementing the Tomatis method the director, Helga Lopez Vasquez, had found that the children had two main difficulties: lack of physical development and poor attention span. After implementing the Tomatis project she and the teachers reported the children to be focused, on task, more aware of what they were doing, able to listen to the teacher and do work appropriately. Stress disappeared; they danced with greater ease, listened to the music effortlessly, were keeping the rhythm, were aware and engaged in group activities. (Lopez Vasquez)

11. Tomatis for School: A Research Project – Sylvia Lozano (2006)

A second school study in Colombia was implemented by Sylvia Lozano, speech therapist and Tomatis consultant. “Tomatis for School: A Research Project” received a grant from the International Association of Registered Tomatis Consultants in 2005. The National University of Colombia- Bogota provided methodical support by giving advice and choosing adequate tests which were implemented by speech therapists. The project started in 2006 and aimed to answer the specific question: Do children between the ages of 5 and 6 exposed to the Tomatis Method show a differential effect in their communicative, linguistic, cognitive and emotional skills compared to musical stimulation in a typical classroom scenario? Using a pretest posttest design, a total of 78 children were divided into three groups of 26. The intervention was implemented in 3 phases of 20 hours each with a break between phases. Group 1 received the Tomatis method. Group 2 received musical stimulation without the electronic ear and Group 3 received no auditory intervention. All three groups simultaneously performed the same creative manual exercises appropriate to their age. Groups 1 and 2 were together in the classroom while Group 3 was held in the library. Listening abilities and attention improved for Group 1 participants. This group had significant results in communicative, linguistic and cognitive categories. Better socialization with classmates and adults and improved presentation of their work, improved vocabulary, reading, writing and usage of

the line. Group 2 participants only attained higher scores with pronunciation and easier adaptation to school. Group 3 had higher scores in comprehension; however, a confounding factor may be that there were more girls and a higher education level of the parents in this group. The project concluded that the Tomatis method overall helped develop communicative, linguistic, emotional and cognitive abilities and therefore is a useful tool in prevention within school stimulation. (Lozano, 2006)

12. Tomatis on Schools – Poland (2007)

The Tomatis Method was recently implemented in 200 schools in Poland, under the auspices of the Polish Ministry of Education, for children with special needs attending special schools, integration schools as well as integration classes of regular schools. Disorders presented by the children included mental handicap, autism, developmental delay, Down syndrome and others. A novel training schedule was prepared by Joachim Kunze which focused on diagnostics and therapy for special needs children, for the purpose of training 207 Tomatis providers. At time of the 2007 International Tomatis Conference, a post-training meeting was being planned to enable participants to exchange their experiences and problem solve. Problems included only one Tomatis facilitator per school and inability to perform testing on many cases in this difficult group of children. Nevertheless, Tomatis facilitators report a generally high percentage of positive results of the Tomatis program. (Ratynska, 2007)

13. Tomatis Research with Pregnant Mothers

Dr. Alfred Tomatis was always very interested in these early phases of development and research was completed on the effects of the Electronic Ear and the Tomatis Effect on the developing baby in the womb. The use of the Tomatis Method during pregnancy was begun in 1988 at the Maternity of the Vesoul, under supervision of Dr. Klopfenstein and Marie Ouvrard. The results were so strongly in favor of the method that the Tomatis Method has become part of the hospital's permanent practice.

More recently, Dr. Penet and Madame Tjordman undertook a similar study at the Hospital Foch de Suresnes. Three groups of pregnant women were elected. One group of 245 women had no special maternal care. Another group of 683 women had a maternal program consisting of breathing, relaxation, and a birthing pool. A total of 223 women had the above program and also the Tomatis Method. The results were as follows:

- Decrease in labor time between control groups and groups who were prepared with the Tomatis Method.
- The uterine dynamic of the women in the Tomatis group was ameliorated.
- Babies of mothers in the Tomatis group had a superior birth weight to a gestational age that was more advanced.
- APGAR scores showed the babies from the Tomatis group recouped faster and better than control group babies.

- At Vesoul specifically they found a lesser need to use instrumental intervention with the Tomatis group mothers.

The mothers in the Tomatis reported the following:

- The quality of their dreams was peaceful and positive.
- They did not experience the usual feeling at the end of pregnancy of being inhibited, strained or “handicapped”.
- The disappearance of back pains
- A normal walk
- Better Listening
- Increase in creativity
- Their “psyche was on top of things”
- The babies were calmer in the womb
- Mothers felt more “well” and calm returning home with their babies.
- The quality of the immediate bonding and mother / child relationship was improved.

So, we need more research in this area, but it is fascinating that we could possibly give a child the opportunity to a better start in life and possibly prevent more early life difficulties than we could even imagine now. Will science ever be able to keep up with the demand for knowledge that exists today?

14. Case Study Research from A Total Approach



A Total Approach has compiled a booklet of 14 case studies ranging in age between 3 years, 1 month to 8 years, 7 months. The average time span from pre-assessment to post assessment was 8 months, though the re-assessment is typically completed 2 to 3 months post intervention.

Some of the areas of improvement are highlighted as follows: (Not all individual changes are reported as we attempted to look at common factors.)

1. Full Sensory Profile - 8 of the 14 subjects showed significant improvements in this qualifying measurement tool.
2. Prone Extension – A measurement of postural control that serves as one indicator of vestibular function – 8 of the 14 subjects showed improvements
3. Supine Flexion – a measurement of postural control that is postulated to serve as one indicator of somatosensory processing – 7 of the 14 subjects showed improvements.
4. Fine Motor Skills – 3 of 14 subjects indicated improvement
5. Sensory Integration and Praxis Test – All 4 subjects re-tested on their areas of weaknesses on this test, normalized the results of their subtests, except for one

- subject on Sanding and Walking Balance and 1 subject on Oral Praxis, though improvements were made as well in both situations.
6. Ocular Motor Skills – 8 of 14 subjects made significant improvements in ocular motor skills.
 7. De Gangi Berk Test of Sensory integration: 6 of 6 subjects tested on this test normalized their total test scores.
 8. Peabody Developmental Motor Scale – 4 of 4 subjects tested showed significant improvements upon re-testing the same parameters.
 9. Praxis – 6 of 14 subjects made clinically significant progress when re-assessed. More subjects made additional improvements though not all on same parameters of the full spectrum of praxis ability.
 10. Scan C: Test of Auditory Processing Disorders in Children – 6 of 6 subjects tested and re-assessed with this test indicated significant improvement.

There were much more anecdotal findings, but we attempted to stay with test-retest data so we could present the actual clinical findings. We are currently finalizing this data in a format presentable to Occupational Therapy Journals and hope to work towards having some our cases published in order to create support in acquiring funding for our own research project. We are planning to have 4 groups of 6 children in each group to complete a rigorous control study. We are excited about this venture and will post updates as we progress through all that is necessary to get this big step.