

Sound Therapy

Research Summary

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Director and Founder of Sound Therapy International

Background

In the 1940s Dr Tomatis, a Paris based ear, nose and throat specialist conducted clinical trials with singers, aeroplane mechanics and others to determine how their hearing was affected and whether it could be improved.

He went on to develop a method of treatment which addresses hearing and listening from both the physical and the psychological aspects.

Through his experiments he also discovered that high frequency sounds, softly played stimulate and replenish brain energy, and are in fact essential for optimum functioning of the cortex.

The Tomatis Method

As his initial concern was with hearing loss, Tomatis' first experiments dealt with altering the auditory curve.

When there is loss of hearing in a particular frequency it is generally not a total loss - it just means that those frequencies where there is a scotoma are heard at a lower level. Tomatis designed an apparatus called the Electronic Ear, which could manipulate the frequencies of sounds, so it could match a sound to the person's auditory curve, or it could do the opposite. It could boost the deficient frequencies to make the person hear as a normal ear would hear.

Initially Tomatis worked with singers who had lost certain frequencies from their voices. He found that the dead spots in the voice exactly matched the dead spots on the audiogram, and by correcting the hearing curve with the Electronic Ear he could restore the missing frequencies to the voice.

Thus he formed his first law: "The voice contains only those sounds that the ear can hear."

This discovery was given official recognition in 1957 by the French Academy of Science as the "Tomatis Effect." In 1958 Tomatis' invention, the Electronic Ear won a gold medal for scientific research at the Brussels International Exposition.

The Self Help Method

Patricia Joudry, a Canadian author underwent the Tomatis treatment in the late 1970s and experienced total relief of her chronic insomnia, exhaustion, writers block and the listening disorder for which she was first referred to the treatment. This is known as "The Cocktail Effect", which is the inability to discriminate between different sounds in a noisy environment.

Patricia and her daughter, Rafaele Joudry, then released the self help Sound Therapy program on portable listening equipment, along with their book: **Sound Therapy: Music to Recharge your Brain.**

Research Results

In the last few decades there have been numerous controlled studies, clinical experiments and case histories, which confirm benefits of the Tomatis method for a variety of conditions.

A number of studies have been done since the 70s in Canada, South Africa, Australia and Europe.

Canada

Kershner et al Canada (1990) undertook a 2 year study of 26 students with a control group using an auditory placebo. As improvements were found in both groups, researchers concluded that there was a lack of support for the educational efficacy of the Tomatis Program for learning disabled children. However, Gilmore's meta analysis (1999) covering four smaller studies of the Tomatis method, including Kershner's work, found that "Positive

effects sizes were found for each of the five behavioral domains analyzed"

Sandislands, Lethbridge, Canada 1989

Compared 32 underachieving children with a control group of 40. The treated group showed greater improvements in listening, oral reading and behaviour.

Weiss, Ottawa 1985

Three theatre students after seven months of Sound Therapy showed a shift of vocal energy to the higher frequencies and better articulation.

Wilson, 1982

Pre-school language disordered children showed statistically significant improvement in their ability to express thoughts and feelings in words. The study gives a strong indication that the Tomatis approach is useful when used with pre-school learning disabled children.

Gilmor, Toronto 1982

Found improvement in children and adolescents' self concept, social and family relations and certain language and motor skills.

Rourke and Russel, 1982

Compared experimental and control groups and found improvement in IQ of learning disabled children under Tomatis treatment.

Roy and Roy, Ottawa 1980

Two doctoral theses on the effect of the Tomatis method on five dyslexic boys showed improved cognitive control and audio-vocal control in four of the subjects.

USA

Porges, Stephen, 2008, is conducting research using sound therapy to enhance the social engagement of children with Autism. The model "emphasizes the importance of extracting human voice in social settings via the cortical neural regulation of the middle ear muscles. The intervention uses a relatively narrow frequency band that focuses on the frequencies of human voice. The acoustic stimuli are computer-altered by applying digital filters to extract specific frequencies. These filters are part of a complex algorithm that modulates the width of the frequency to "exercise" and

"stimulate" the neural regulation of the middle ear muscles and to integrate the components of the Social Engagement System."

Swain, Deborah, USA 2007

studied the effects of the Tomatis Method on 41 subjects from age 4 to age 19 with auditory processing disorders. Standardized tests were used pre and post treatment. All subjects demonstrated statistically significant improvement with skills of immediate auditory memory, auditory sequencing, interpretation of directions, auditory discrimination and auditory cohesion. Researchers concluded that the Tomatis Method can be effective as an intervention strategy for auditory processing disorders.

South Africa

Van Wyk, South Africa, 1974

Compared 20 stutterers with 20 normal speakers and found that more stutterers have left ear dominance, confirming Tomatis' hypothesis of the importance of right auditory laterality.

Badenhorst, South Africa, 1975

Found that right-eared people communicate more easily, confirming Dr Tomatis' theory.

Jaarsveld, South Africa 1974

In a group of 43 stutterers, 82% got significant relief from the treatment, 54% retained the improvement for a year or more.

Peche, South Africa 1975

On a group of 10 students found that Sound Therapy helps to alleviate anxiety and remove psychic blocks, so is beneficial in conjunction with psychotherapy.

Botes, South Africa 1979

Found improved relationships and self-concept in an in depth study of three clients with neurotic depression.

Du Plesis, South Africa, 1982

A long term study over 14 months with subjects carefully selected from a survey of 424 people showed improved mental health and self

actualization for both 10 anxious and 10 non anxious people as compared to a control group.

De Bruto, South Africa 1983

Found a statistically significant increase in the mental age of profoundly retarded children after Tomatis treatment.

U.K.

Jordan, Wigan, U.K. 1989

Found 90% of tinnitus sufferers got some relief as a result of Joudry Sound Therapy.

Australia

Rintel, Brisbane 1995

Used Joudry tapes for learning disabled children and found they advanced faster in reading, spelling and auditory discrimination compared to a control group.

Joudry, Sydney, 1994

A three year survey of 388 respondents showed 45% to 100% symptomatic improvement in subjects presenting with tinnitus, hearing loss, stress, fatigue, sleep problems, learning difficulties, speech problems, depression, headaches, jet lag and for general well being. 93% of subjects observed some positive results in at least one area.

Bell, Brisbane, 1991

Case study using Joudry tapes on a Year 2 boy with delayed development showed improved social behaviour and he began to read.

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