Basic Concepts of *CBIT* - Comprehensive Behavioral Intervention for Tics

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Providing Tools For Life

CBIT (pronounced see-bit) combines six strategic therapeutic components in the form of a clinically proven comprehensive non-medication therapy to help a child (person) with Tourette Syndrome manage their tics.

Behavioral Therapy

Behavioral therapy is a treatment that teaches people with TS ways to manage their tics. Behavioral therapy is not a cure for tics. However, it can help reduce the number of tics, the severity of tics, the impact of tics, or a combination of all of these. It is important to understand that even though behavioral therapies might help reduce the severity of tics, this does not mean that tics are just psychological or that anyone with tics should be able to control them.[2]

Habit Reversal

Habit reversal is one of the most studied behavioral interventions for people with tics[1]. It has two main parts: awareness training and competing response training. In the awareness training part, people identify each tic out loud. In the competing response part, people learn to do a new behavior that cannot happen at the same time as the tic. For example, if the person with TS has a tic that involves head rubbing, a new behavior might be for that person to place his or her hands on his or her knees, or to cross his or her arms so that the head rubbing cannot take place.[2]

Overview

Tourette tics are involuntary, but can be influenced by internal and external factors such as stress, fatigue, excitement; the reactions of others to one's tics; either actions or reactions that are consequences or antecedents to tics being expressed.

Tourette tics can be temporarily suppressed, unlike Parkinson's tremors for example.

Tourette Tics are preceded by a premonitory urge or warning that the tic is coming. Some liken it to the sensation of a mosquito bite itch that needs to be satisfied, yet can be delayed temporarily (suppressed).

Tics are thought to originate in the basal ganglia, a part of the brain that matures around 10 to10.5 years when tics tend to peak[3].

Self-awareness in children matures at about the age of 10 (+-2 years). Until then children are largely unaware *that* they tic, however with onset of self-awareness, they then become aware *when* they tic or are about to tic. Self-awareness also includes awareness of the premonitory urge. Children under 10 are usually unable to articulate that an urge precedes the tic.

CBIT is "Do Something Else" therapy, and not "Stop It" therapy

The success of CBIT comes from a *comprehensive approach* that includes:

- Psychoeducation,
- Self-awareness training,
- Relaxation training,
- Establishing a tic hierarchy, selecting a target tic and reverse engineering it,
- Formulating a competing response to the target tic using habit reversal techniques,
- Social support

Psychoeducation includes examining what situations tend to make tics worse and what situations make tics better. The goal is to use that knowledge to avoid the situations that exacerbate tics or to find ways to lessen their impact; then to encourage situations that lessen tic activity.

Self-Awareness Tic-awareness training teaches the child how to self-monitor for early signs that a tic is about to occur using recognition of the premonitory urge.

Relaxation Training includes strategies that can be used to lessen stress and to assist in the management of phonic tics. This would include diaphragmatic (deep) breathing, progressive muscle relaxation and imagery.

Tic Analysis the therapist will help the child (person) identify their most bothersome tic (not the tic that seems to bother someone else (the parent or teacher or spouse), but the tic that causes the person with symptoms the most discomfort, distress or difficulty. The therapist works with the child (person) to recognize the premonitory urge that

precedes that particular tic, and then they break down the tic into its components...what are the precise muscle movements involved in the tic from start to finish.

Competing Response (CR) (Tic Blocker) Once the bothersome tic is identified and analyzed, and some evaluative assessments are made by the therapist, a tic blocker or competing response (CR) is developed so the child (person) can apply the CR when the urge for that tic is experienced. The CR is designed to make performing the tic impossible, but must be less conspicuous than the tic itself and can be performed without any external aids or devices.

Social Support The support of the child's family, friends along with the child's educators is critical in achieving success. Parents may have to advocate on their child's behalf at school to alert teachers on his/her special needs. Most important is the positive reinforcement the child receives at home. When the child employs the correct CR, s/he needs to be praised and if s/he happens to miss using the CR and the tic emerges, parents should remind the child about using the CR, not in a punitive tone, but rather in a supportive and encouraging tone.

Why does CBIT work?

In medicine there has to be a rational mechanism of action for a treatment or therapy to explain its effectiveness. The effectiveness of CBIT has been demonstrated and published in peer reviewed journals [4,5] and is thought to work by strengthening the neural pathways between the basal ganglia and the pre-frontal cortex of the brain. CBIT works by breaking the premonitory urge -> tic -> relief feedback cycle by implementing the competing response.

The basal ganglia is the region of the brain where Tourette Syndrome is thought to originate by the spontaneous release of unwanted muscle actions, while the pre-frontal cortex is the region of the brain where voluntary control over our actions occurs.

In time, usually in a few of months of applying the CR *combined with the other comprehensive components of CBIT*, most children will have developed the ability to manage their tics to their satisfaction.

By providing CBIT to a child who is troubled by his/her Tourette tics, parents can regain some of the control they often feel they don't have in being able to help their child. The child benefits by learning strategies that can give them control, lifelong, over their symptoms.

Having learned the techniques taught in CBIT, the child is then able, usually on their own, to develop their own CR's for other tics that may be or become bothersome, and continue using the relaxation strategies and the knowledge gained from understanding

their tic triggers to more effectively manage their symptoms throughout their lives. These strategies indeed provide children with Tourette Syndrome ***Tools For Life***.

CBIT does not cure Tourette Syndrome and does not eradicate tics. CBIT provides strategies to help manage tic symptoms to lessen their impact.

CBIT is recommended as first line therapy for children by the Tourette Canada as well as other major Tourette advocacy organizations. Tourette Canada bases its recommendation on the *Canadian Treatment Guidelines for Tourette Syndrome*.[6]

At present the number of trained and certified CBIT therapists is limited and sometimes one can be difficult to locate. By contacting your local Tourette advocacy organization, you may learn if there is a CBIT therapist in your area. If not, you may want to let your own doctor or therapist know CBIT training is available and that by conducting grass roots advocacy to alert local medical professionals CBIT therapy is needed, we may succeed in increasing the number of competently trained CBIT therapists.

Alert

It would be counterproductive and misguided for anyone, a parent, an educator or any non-medical professional, with the best of intentions to attempt to teach or administer CBIT to a child (person) suspected of having Tourette Syndrome.

The diagnosis and treatment of Tourette Syndrome is complex, especially when associated co-morbid conditions are considered. Diagnosing Tourette Syndrome requires a face to face interview by a trained medical professional who can adequately assess the person, taking their family and medical history into consideration.

For a successful outcome with CBIT, a trained medical professional assesses the person's (child's) symptoms, as well as the various environmental factors surrounding the person's life. A comprehensive support system needs to be established involving everyone in the treated person's life. Most importantly, a trained medical professional uses specific tools to objectively assess, monitor and track the progress of the patient, modifying the treatment plan in accordance with the progress.

Without proper training and accreditation in providing CBIT treatment, an incompetent approach can result in exacerbation of the patient's symptoms by raising stress and anxiety as a result of the frustration and confusion of being overwhelmed by inappropriate instructions to deal with an already frustrating and overwhelming disorder.

Online options are being developed by competent therapists along with properly conducted clinical trials to provide **guided self-help** for individuals who do not have convenient local access to a CBIT therapist.

Other modes are being investigated for future delivery options such as *online* CBIT training, group therapy and therapy by alternative medical practitioners such as nurses.

CBIT: Tools For Life

References:

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2) http://www.cdc.gov/ncbddd/tourette/treatments.html#CBIT
3) NJCTS Webinar April 23, 2014 Dr. Lawrence W. Brown MD, Pediatric Neuropsychiatry Program, The Children's Hospital of Philadelphia
4) Behavior Therapy for Children With Tourette Disorder
5) Randomized Trial of Behavior Therapy for Adults With Tourette Syndrome
6) Canadian Guidelines for the Evidence Based Treatment of Tourette Syndrome Page 66

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