A supportive response and development program of behavioral and social skills of a student with syndrome Tourette - a Case Study

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RÉSUMÉ

Le présent travail a pour un but de présenter un programme soutenable d'intervention en ce qui concerne les capacités de comportement et les capacités sociales d'un élève de l'école primaire qui souffre du syndrome de Tourette.

Les objectifs de l'intervention sur le comportement, qui touchaient beaucoup à une approche psychologique, étaient focalisés sur l'observation des difficultés interpersonnelles par exemple la difficulté de la communication, la difficulté de la compréhension et de l'expression des sentiments ainsi que l'observation de capacités sociales qui incomplètes dans les personnes avec le syndrome de Tourette. De plus, après l'observations des difficulté nous avons travaillé pour surmonter les problèmes du comportement , par exemple la difficulté du respect des règles , la difficulté de l'acceptation des limites, la dissociation de l'attention, le comportement asocial et la difficulté de l'intégration dans un groupe.

Le programme était intensif et a été mené sur une année.

Plusieurs objectifs ont été atteints et le patient a pu évoluer dans son développement avec une meilleure intégration sociale et scolaire.

Mots-clés: S. *Tourette, l'intervention sur le comportement-la psychologie, les difficultés interpersonnelles, problèmes du comportement.*

ABSTRACT

This paper intends to present a supportive intervention program for the behavioral and social skills of an elementary school pupil with Tourette syndrome. The aims of our behavioral- psychological intervention have focused on the development of interpersonal skills to cope with interpersonal difficulties, such as difficulties in communication, understanding, expressing emotions and the lack of social skills, as well as behavioral problems, such as difficulty in complying with rules, difficulty in accepting limits, attention deficit, antisocial behavior and difficulty in group integration. The program has been intensive and has lasted for one year. The majority of the aims have been achieved.

Key-words*: S. Tourette, behavioral - psychological intervention, interpersonal difficulties, behavioral problems.*

Introduction

The Tourette Syndrome or Syndrome Gilles de la Tourette is an uncommon chronic disorder with onset in childhood which is mainly characterized by symptoms such as multifocal motor and vocal tics and, in addition, “difficulties in the articulation and the formation of words as well as the use of profanity or swearing” [1]. Tics are usually “rapid, recurrent, non-rhythmic, stereotyped motor movements or cries”[2]. Such tics may include eye blinking, head jerking, shoulder shrugging and facial grimacing. Throat clearing, sniffing, screams and tongue flap. Leaps, touching other people or things, twirling and sometimes self-harming acts, such as punching oneself or hand biting. Irrelevant words or phrases, coprolalia (socially unacceptable words), echolalia (repeating sounds, words or phrases just uttered by others) and palilalia (repeating the last word just uttered by oneself).

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[1] Miller, J. (2001)*”The voice in Tourette syndrome”*. New literary history (32 519 536).

[2] Schroeder, T. (2005) *“Moral responsibility and Tourette syndrome”*. University of Manitoba, Philosophy and phenomenological research (Vol. LXXI No. J).

Although T.S. [3] was once considered rare, according to recent studies it occurs in 4-6 children per thousand. It remains under-diagnosed, since parents tend to turn to experts for help only when other problems coexist. It is 3-4 times more common in boys than girls.

The causes of T.S. are unknown. However, recently, knowledge on the path physiological basis of this neuropsychological phenomenon has fortunately been increased and there has been a great interest in the T.S. in the field of Human Neurobiology.

Despite the accumulation of all this information, the causes of the vocal and other tics, as well as the nature of the relationship with the obsessive-compulsive disorder and the attention deficit hyperactivity disorder (which usually coexist with the syndrome) remain unknown. Genetic studies have shown that the susceptibility to T.S. is associated to a considerable extend with genetic factors[4].

T.S. is diagnosed when the tics occur many times a day, nearly every day for over a year. The average age of onset is 7 years but they may occur earlier or later, nevertheless certainly before the age of 18 years. In the course of the disorder new tics constantly emerge and older ones disappear. Motor and vocal tics are aggravated by anxiety, stress, boredom, fatigue and excitement, whereas sleep, fever, rest or concentrating on an enjoyable task usually lead to a temporary disappearance of symptoms.

Although the tics are essentially "unintentional", some patients show an ability to suppress them occasionally for a while, e.g. in the classroom, in the medical office or while playing. Only a percentage of about 12% of the children with T.S. who are monitored by specialists display only tics [5].

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[3] In this paper we use T.S. instead of Tourette Syndrome.

[4] It is nowadays believed that the T.S. is the most serious manifestation in a range of symptoms, including transient or chronic tics and *Obsessive Compulsive Disorder-OCD.* So, when a family member displays symptoms of T.S., tics or obsessive-compulsive symptoms may be found in first or second degree relatives.

[5] The National Institute of Neurological Disorders and Stroke (NINDS) and other institutes of the National Institutes of Health (NIH) to conduct research in laboratories at the NIH and support further research through grants to major medical institutions across the country. Knowledge about TS comes

These children usually have normal intelligence and are able to attend regular schools. However, they very often display obsessive-compulsive disorder. They therefore exhibit intrusive thoughts (obsessions) and they feel the need to do repetitive actions (compulsions), such as repetitive hand washing or recurrent checking of the door lock.

ADHD (Attention Deficit - Hyperactivity Disorder) usually coexists with T.S. Despite the fact that the existence of ADCD does not seem to increase the possibility for T.S., however an average of 48% of the people who have the syndrome are also likely to develop ADHD (Comings & Comings 1998) [6].

Symptoms such as concentration difficulty, hyperactivity and impulsiveness, general learning disorders and difficulty in impulse control resulting in aggression or antisocial acts are observed in ADHD. According to the child psychiatrist Rutter, 70% of the young people with learning difficulties present misconduct behavior (Rutter & Giller, 1983). They also present sleep disorders, such as delayed onset of sleep, interrupted sleep, sleepwalking and nightmares. A small percentage of young people with T.S. behave self-destructively, displaying behaviors such as self hitting or self slapping, wound scratching and lip biting.

The subject of our study

In our study, we investigated the case of a student named K. with T.S. of Greek origin, who was born in March 2000 and in the year of our intervention he studied in E Class in the Resource Room of a Mainstream Primary School. K. had severe

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from studies in a number of medical and scientific disciplines, including genetics, neuroimaging, neuropathology, clinical trials, epidemiology, neurophysiology, Neuroimmunology, and descriptive / diagnostic clinical science. The findings from these studies will provide clues for more effective treatments. The Department of Child and Adolescent Psychiatry of the General Hospital has developed Sismanoglio's Special Clinic for Neurodevelopmental Disorders. The interdisciplinary team that has specialized in the diagnosis and treatment of children and adolescents with T.S.

2 According to Pauls et al., (1986), Shapiro & Shapiro, (1989), some researchers point out that this high percentage of comorbidity may be due to the fact that the people who present coexistence of both the disorders attend medical centers more often than others.

learning difficulties, especially in language. The symptoms of the syndrome on K. were very intense. Of course, this was consistent with his age (11 years old)[7].

As a result of his difficulties, K. had been isolated by his classmates and by children of the same age in general, as he could not control himself and other children felt uncomfortable with him. Consequently, they sometimes did not approach him and at other times they teased him because of his strange behavior. However, K.'s antisocial behavior did not reach the other end of the spectrum; it did not result in aggression towards others.

K. is the first child of a large family. His parents have university education. In K.'s psychological assessment at the age of 8, which was made by a certified Child Guidance Center (Medico Pedagogic Center), it is attested that K. displays weaknesses in his audio perceptual ability, in concentration, in attention and in the fine motor skill, as well as general learning difficulties.

Our supportive intervention program

K. lagged in the social and behavioral domain because of emotional factors caused by the syndrome. This resulted in unpopularity and deficient social skills.

Our intervention was, therefore, behavioral-psychological, since, apart from affecting his school performance, his learning difficulties had emotional and social consequences, namely low self-esteem and social interaction difficulties, as well as isolation[8].

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[7] People with T.S. live a normal life. There is a period in which the symptoms peak, that is at the age of 10-15 years approximately. In about one third of the cases the tics subside fully until adulthood, even if they sometimes reappear later. Moreover, in one third of the cases the symptoms diminish. In the rest of the cases the tics remain for a lifetime. In the majority of cases the syndrome develops with remissions and bouts. According to a recent study the most intense tics are noticed at the age of 10. In half of these cases the tics subside fully in adolescence.

[8] . Reflex assessment function aims to foster the psycho emotional area and to promote self-awareness Panteliadou, S., 2003. *Children and Adolescents with special needs and abilities. Contemporary trends in Education and Special Support.* Athens: Atropos.

Our behavioral intervention[9] focused on the following areas: the development of self-esteem, the reduction of anxiety and insecurity and the development of social skills (self-control, social perception, social interaction), aiming at the child's integration into the group. The duration of our intervention was one year. The sessions were intensive; they were three times a week and lasted one hour each.

It must be emphasized that we attached great importance to establishing a healthy relationship of trust with the child, as this relationship strengthens one emotionally and makes one capable of copying with all possible difficulties one encounters in life. We also had an excellent cooperation and consensus views with his parents.

Our personalized behavioral intervention aimed at the following declined areas

<u>Interpersonal difficulties</u>

- Communication difficulties
- Difficulty in understanding and expressing emotions
- Inadequate social skills.

<u>Behavior problems</u>

- Difficulty following rules
- Difficulty accepting limits
- Attention deficit
- Antisocial behavior
- Difficulty integrating into the group

Our individualized behavioral intervention program ran in parallel with the interpersonal difficulties part and the behavior problems part. K. has individual skills but he does not possess all the patterns of behavior. We, therefore, faced his behavior problems with the behavior modification method because it is both theoretically grounded and effective.

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[9] The Advanced Applied Behavioral intervention is also suitable for intervention in the context of special and mainstream primary schools and kindergarten schools (Eikeseth et al., 2002. Gena, 2006. Howard et al.).

We constructed an intervention plan and used various forms of reinforcement, such as external reinforcement, which is based on operant conditioning, as well as self-reinforcement and representative reinforcement, which are based on model learning. At the end of each step, we reviewed the effectiveness of our program. The basic steps we took, all according to K.'s pace were the following.

- We reinforced the concentration of attention and set limits to the behavior. Consequently, we established rules of conduct and we specified that the objective of limit setting was to restrain and reassure K. and not to punish him. We, therefore, set limits consistently, logically, quickly and simply. We avoided generalizations (like e.g. "behave properly" or "be good"). Instead we described the expected behavior from the beginning of the program. We tried to have frequent eye contact throughout the intervention program, so as to call him to order using a look or paralinguistic messages (body movements, touching etc).
- We also cooperated (worked in parallel) with his parents in order to achieve common tactics and action.
- In every step of the program we observed his behavior systematically, in order to see what triggers the disruptive behavior each time.
- As far as motivation and emotions are concerned we used classic conditional learning in order to create new links with the stimuli that cause behavior. We practiced his individual abilities and promoted his behavior using the chaining method through positive reinforcement. We praised the combination of sub-skills until the behavioral sequences were integrated into a complete sequence. We withdrew our support after the creation of the behavioral chain.

More specifically, we ranked the stages and methods we followed as detailed below:

- We reinforced K.'s target-desired behavior immediately after its manifestation in order to reinforce the quick creation of new behavior. On the contrary, we reinforced the already formed or current behavior at regular intervals in order to maintain it. We, therefore, highlighted his positive characteristics, we praised him when he demonstrated positive behavior and we encouraged him in order to smoothly integrate into the peer group. In every success case we rewarded his good behavior letting him know why we were pleased with him. We

also reinforced his strengths and relied on them in order to raise his confidence.

- Besides behavior reinforcement we used the method of behavior formation, approaching the target behavior sequentially, firstly by continuously reinforcing behaviors relevant but remote from the target behavior and, consequently, by reinforcing behaviors similar to the target behavior.

- In the next stage K. built new complex behaviors through the behavioral assistance method and the behavioral withdrawal method. Thus, besides the method of behavior formation we also applied the behavior assistance method using direct verbal or physical assistance, while supplementary praising the outcome.

- In the initial phase of our effort to obtain a behavior we presented to the child the expected behavior to a problem or question that occurred suddenly. Consequently we strengthened the common practice (verbal or nonverbal) and we resolved jointly the first part of the problem or the question, aiming the rest of the answer or the solution to be resolved or answered by K. alone. Gradually, we reduced our assistance up to the point of final withdrawal.

- As far as punishment is concerned, it never consisted of physical or verbal humiliation. Instead, by leading long discussions and with a lot of understanding on our part we explained to him the consequences of his behavior and the consequences that others around him have to face. However, if punishment was needed, we preferred the immediate deprivation of privileges, in order for him to understand that this did not happen because we did not love him but as a result of his conduct.

- We reinforced his social integration and collaborative mood by teaching communication skills and conflict resolution skills such as

listening to the other, waiting for our turn to talk, expressing our disagreement in a mild manner, placing ourselves in another person's position trying to figure out how he/she feels. For example *"every man has the right to express his opinion as you do*", "*before telling your story listen to the other person's story"*, "*look at the other person when he/she speaks" or 'how would you feel if you were in your friend's position?"*.

- To accomplish this aim we used emotion expression games and role-playing games. In addition we reinforced skills in order for him to express friendly feelings towards others, to help them when in need, to follow the rules of an activity, to participate in decision making, to take on responsibility for his actions, to be polite when communicating with others, to willingly follow orders or instructions given to him, to respect the work of others, to accept his failure, to stand up for his rights with discretion and ultimately to respect the opinion of others.
- Finally, we encouraged the opportunities for self-observation of his behavior and his school performance, as well as the behaviors of self-regulation in order to manage his willingness and the emotions generated during the learning process.

Results-evaluation-reflection

The majority of our initial aims have been achieved as shown in the tables 1, 2 below. Furthermore, the learning process became a source of joy and satisfaction for the child. K. was cooperative, willing and attentive for the greatest part of our intervention by means of a conscious self-regulation of his behavior and his motivation.

From the beginning of our cooperation a sense of mutual trust and interest was developed between us. Even if his difficulties in managing and adapting to new circumstances and new methodological approaches often caused him fatigue, K. did not give up his effort. The reduction in the frequency of conducting undesirable

behaviors was very evident. Our good cooperation with K.'s family was certainly an additional positive factor.

More specifically, K. developed good but not perfect communication skills. However his hyperactive and impulsive behavior was noticeably reduced. He achieved the goal of understanding and expressing emotions, since he managed to adapt his emotional expressions to the social conditions and to understand, express and share his emotions. However, the goal of acquiring social skills was not totally achieved. Even though his hyperactive behavior was reduced, he did not manage to fully adjust his stimulation and adapt it to the requirements of each current activity.

The objectives of following rules and accepting and observing limits were achieved, while the development of attention capacity was not totally achieved. However, K. kept his attention for the longest part of each session.

In addition, K. did not show antisocial behavior, so the target of integrating into the group was achieved. K. managed to self-regulate his behavior and his physical and vocal tics, preventing them from becoming a hindrance to his effective integration to the group of peers. Furthermore, his involvement in the learning process increased significantly.

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Figure captions

Table 1: Interpersonal difficulties

Table 2: Behavior problems

Evaluation tables of the intended teaching aims

Table 1: Interpersonal difficulties

INTERVENTION OBJECTIVES	POST INTERVENTION	
Communication difficulties		While K. reduced Significantly his hyperactive and his impulsive behavior. However, he hasn't maintain the desirable behavior.
Difficulty n understanding expressing emotions	✓	According to social conditions, K. managed to adapt his emotional expressions As well, he understands, express and share his feelings.

Inadequate social Skills		Although that K.was decreased his hyperactive behavior, he failed to fully adjust the stimulation and to adapt it to current requirements of each activity.

Table 2: Behavior problems

INTERVENTION OBJECTIVES	POST INTERVENTION	
Difficulty following rules	✓	.
Difficulty accepting limits	✓	
Attention deficit		The aim is not fully achieved. Although, K's attention was maintaining for the longest time of each session.
Antisocial behavior	✓	
Difficulty integrating into	✓	This goal was achieved, as the K. deregulates his behavior. So, his physical and his vocal

group		tics were not hindering its essential joining the group of peers. Also, his involvement in the learning process was increased significantly.