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Brittany Stellin
California State University, Monterey Bay

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Literature Review:

What are the best classroom methods to use in assisting elementary students with
Tourette Syndrome in reaching academic success?

Brittany Stellin

California State University Monterey Bay

Liberal Studies Capstone

Professor Scott Waltz

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ABSTRACT

This capstone investigates and compiles the best known classroom methods to help students with the neurological disorder Tourette Syndrome (TS) in achieving academic success. Tourette Syndrome is a disorder that not only makes academic life a struggle with its distinctive tics or twitches, but sufferers often have ADHD like symptoms as well. The best methods discussed in this capstone cover the categories of academic assistance, behavior management, and socialization help in the classroom; all of which when addressed are known to assist a TS child in reaching academic success.

DEDICATION

To my younger brother Jake,

Without you who knows where my life would be headed. Your struggles with Tourette Syndrome all throughout your life, but specifically throughout your academic career have inspired me more than you could ever know. Not only have your academic difficulties been the primary inspiration for this paper, but also for my goal of becoming a special education teacher. Your strength and patience with yourself, and my experiences with you, have provided me with a unique strength and patience for all special needs students. Watching you go through both negative and positive experiences with both resource and mainstream teachers has shown me that there needs to be more of the great teachers out there that are prepared to educate all students like you. While I know I will hopefully be added to the list of those great teachers in a couple years now, I also felt like I need to do more. I wrote this paper in hopes of it reaching other teachers and providing them with a resource to help their TS students. Maybe now, because of you and me, far less students with TS will have to go through the negative experiences you did. I believe we are changing lives, and in that respect and many others, your life has been an enormous gift. You are going to do many more amazing things. I could never thank you enough, and I love you with all my heart!

INTRODUCTION

Tourette Syndrome is a complex disorder that can be demonstrated with several combinations of symptoms, and is often only known for its more stereotypical symptoms portrayed in the media. As a result, according to Wilson and Shrimpton (2003) it is common for there to be misunderstandings and lack of support for students with TS and their teachers. Also, according to the National Institution for Neurological Disorders and Stoke (NINDS) (2005), the current estimated number of Americans suffering from Tourette Syndrome is about 200,000, while about one in 100 people are estimated to suffer from milder forms of TS as well. It is also important to note that Tourette Syndrome according to NINDS (2005) is always noticed in childhood, with the onset of the disorder between ages seven and ten on average. Lastly, research by Davidovicz (1994) indicates that of students with TS, about 60% of them have difficulty functioning in school, and that about 30% of those students have a more serious learning disability. Therefore, there is a strong need to assist educators in learning about Tourette Syndrome and how to better accommodate TS students' needs in the classroom in order to help them reach academic success.

Gilles de la Tourette Syndrome (TS) is described by Tourette Syndrome Association, Incorporated (2007) as a neurological disorder that is defined by multiple motor and vocal tics lasting for at least one year and present before the age of eighteen. The Tourette Syndrome Association, Incorporated (2007) continues to describe these tics as involuntary urges to perform a motor activity, which can include movements of the face, arms, limbs, or trunk and are frequent or rapid and can be as an eye blink or nose twitch, or as noticeable as a kicking or stamping. Verbal tics also occur, usually with the

movements, and can be mild such as throat clearing or grunting, or as extreme as shouting and barking (Tourette Syndrome Association, Incorporated, 2007). Also, according to Tourette Syndrome Association, Inc. (2007) coprolalia, which is the involuntary use of obscene words or phrases, and copropraxia, which is the use of obscene gestures, may be present. However, despite their frequent depiction in the media, the two are actually relatively uncommon in people with Tourette Syndrome. Also less frequently, but occasionally reported in TS sufferers, is the expression of echolalia, or repeating words of others, palilalia, which is repeating ones own words, and also the repeating of the movements of others (Tourette Syndrome Association, Incorporated, 2007). Tourette Syndrome Association, Incorporated (2007) stresses that these symptoms of Tourette Syndrome vary considerably from person to person, and fall on a mild to severe scale, with the majority of TS sufferers falling on the mild side of the scale. There are several associated conditions listed by the Tourette Syndrome Association, Incorporated (2007) including ADHD/ADD, obsessive compulsive behaviors, and learning disabilities, and it is noted that males are affected three to four times more than females.

Each of these symptoms of Tourette Syndrome, including the common associated features such as ADHD, would clearly affect a sufferer's school experience. The difficulties most commonly displayed in TS students to be addressed in order to help them achieve academic success are problems with concentration and focus on their academics, behavioral characteristics that are troublesome in the classroom, and getting along with other students which affects their psychosocial development at school (Stefl & Rubin, 1985). Specifically then, one could say that the most important areas for a teacher

to address in accommodating their TS student(s) would be in academic monitoring, behavior management, and socialization. It is noted by Wilson and Shrimpton (2001) that when teachers are flexible and adjust for their TS students in accordance with these areas that the necessary needs will be met for a successful educational process for the TS students.

<div align="center">LITERATURE REVIEW</div>

Academics

Through research it has been shown that there are specific academic difficulties that students with Tourette Syndrome struggle with. These areas can be broken down into two broad categories of visual-motor difficulties in handwriting and written mathematics, and problems with reading and language fluency. In the area of visual-motor difficulties, Knoblauch (1998) wrote that visual-motor integration problems are common with TS students and may cause problems in areas such as seeing, processing, and then writing material, making it extremely difficult and time consuming. Knoblauch (1998) continues to elaborate by stating that this area of difficulty will cause further trouble when it comes to time restrictions, need for neatness, completing long assignments, and taking notes or copying from books or the blackboard. Wilson and Shrimpton (2003) also state that problems in visual-motor integration are also the result of TS tics themselves, as excessive moving and jerking of the twitches can cause tension, pain, and frequent interruption which is extremely disruptive and makes written assignments extremely overwhelming at times.

There are several things that teachers can do in the classroom to help improve the visual-motor integration problems that TS students have. First there is the issue of time

restrictions, and the easiest methods to alleviate the pressure of time for a TS student on a regular basis. According to Connors (1994) all assignments should be modified or requirements of the assignment should be reduced for TS students. This method has several different variations which can include assigning the student only every other problem or by extending a time requirement to fit their needs depending upon the situation. There is also the issue of testing to consider. Favish (1994) recommends allotting more time on tests, removing time restrictions on tests altogether, allowing for writing only numbers or letters to represent answers where other students may be required to write in whole words or phrases for an answer, and also to provide a ruler on standardized tests to help the child follow from the test booklet to fill in their answer correctly on the scantron row. Connors (1994) also suggests just allowing the student to write answers in the test booklet for standardized tests, and taking separate time later to transfer the answer to the scantron so that this does not becoming time consuming or too overwhelming during the actual test session. In order to assist with problems in note taking and writing down directions, there are many methods that can assist the TS student in variable situations. First, if it is possible, the teacher can provide readable instructions to the student on paper, so that the student does not need to worry about writing anything down at all (Connors, 1994). Chowdhury and Christie (2002) also suggest making photocopies of your own notes or directions for the student when possible. However, these two options are not always available depending upon the situation. Another option provided by Bronheim (1991) is to assign the student a note-taking buddy/scribe, possibly assigning a weekly class secretary, or asking any available student to slip a piece of carbon paper under their own notepaper in order for another set of notes to be taken for

the student. This of course can be done with or without the student knowing why they are taking an extra set of notes depending on the particular classroom's dynamics. A last option if feasible for the school or student would be to allow the student to use a laptop at their desk to complete assignments and to take notes because this can often be a bit easier than handwriting for the TS student (Chowdhury & Christie, 2002). The use of classroom word processors or personal laptops can also provide another form of assistance to the TS student as well. As Bronheim (1991) explains, word processors allow the student to not be concerned with spending additional time on assignments in attempting to spell correctly, as the computer offers spell check, along with the student not needing to worry about the neatness of their handwriting either. Bronheim (1991) also stresses that spelling and handwriting should not be considered when grading a TS student's written work if a word processor is not available to them; only effort should count on written assignments because accomplishing both neatness and correct spelling while trying to get work done on time is simply too much for a TS student to manage.

Additional special considerations can be taken for written math problems as well. Jones and Johnson (1993) suggest that to help students keep column work neat a teacher can either provide them with grid or graph paper, or as Knight (1999) suggests, if graph paper is not available the student can turn regular lined notebook paper horizontally to provide them with columns to line their numbers in. Jones and Johnson (1993) continue to write that to further assist students with their math work to provide manipulatives or calculators as often as possible to help the student with rote calculations, so they are not spending the majority of their time on the basics, but instead focusing on the primary lesson needed for that particular assignment. Lastly, to assist students in their visual-

motor difficulties, Knight (1999) recommends scheduling activities such as writing, mathematics, and reading in the earliest portion of the school day as much as possible because as stress and therefore tic tension builds throughout the day it will be more difficult to concentrate on subject matter that is already difficult for the student due to their TS.

The second previously mentioned area of difficulty in academics for TS students is in reading and language fluency. Davidovicz (1994) explains that many TS students have a difficulty in understanding language, as well as in language production. Bronheim (1991) further categorizes these difficulties in reading and language in two symptom categories: language based problems that are common in all children and language based problems that are completely specific to TS children. The language difficulties that TS students often have, which are similar to those other children commonly have as well, are in the areas of needing both visual and auditory input to understand directions and stories, needing directions that are broken down into several steps, and lastly, in the need to reauditorize (or repeat out loud to themselves) directions in order to commit them to memory (Bronheim, 1991). Bronheim (1991) then continues to say that the other language difficulties associated specifically with TS students are looping or, getting stuck on, words or phrases when listening or more often, when reading.

Once again, there are specific things an educator can do to assist their TS students that are struggling with any of the above reading or language problems. First, there are simple things the teacher can do the help with difficulty in students understanding verbal instruction. Bronheim (1991) first writes that the teacher should provide both visual and auditory instruction, or in other words to include hand-outs or words written up on the

blackboard along with their verbal instruction to help students better understand the directions. Also, as much as possible as Bronheim (1991) recommends, the teacher should provide all instructions in a step by step format that the students can either follow along with or refer back to on their own if they get lost or confused in the instruction process. Lastly, Bronheim (1991) adds that the teacher should also be prepared to patiently restate directions or return to previous steps in the directions when the TS student gets lost or confused because often there is something simple in the instruction that is simply getting lost in transmission to the student. Also, in keeping along with the necessity for TS students to have both visual and auditory direction to clarify where language confusion occurs, there are other areas beside basic instruction that can be taken into account. First, as both Connors (1994) and Prestia (2003) suggest, all reading and listening activities should include as many visual aides as possible. Knoblauch (1998) mentions that the students could benefit from any type of pictures or graphs to accompany a text or a discussion. To assist with the problem of looping or getting stuck on certain words or phases in a text Knight (1999) states that using an index card that has a viewing window cut out of the center to drag along the text in order to help view only parts of sentences or passages which can in turn help a student keep focused on what they are reading and to keep them moving, rather than getting stuck. Wilson and Shrimpton (2003) suggest using a ruler or a book mark to help the student keep their place in a similar matter that the index card could accomplish. Then, as a last resort, Knight (1999) states that it may be necessary for the student to walk away from their assignment briefly, or to move on to a different activity, in order to break the repetitive looping or to help them move on from being stuck, and then come back to the assignment later. To assist in

the area of phonics, or learning how to read, with younger TS students, Knight (1999)

states that it will almost always be necessary to teach reading with the whole language, or

decoding, approach along with a phonetic approach to determine which method of

learning works better for the student situationally. It may be useful here to mention that

this may also be appropriate for all students learning to read, but especially for TS

students who have specific language problems as mentioned earlier. Lastly in the area of

reading and language difficulties comes the issue of oral presentations. Language

production is a difficulty for TS students as mentioned previously, along with vocal tics

occasionally or often interrupting speech for TS students and therefore oral presentations

can be extremely difficult for a TS student. In order to alleviate this problem, Knoblauch

(1998) states that the TS student should be allowed to take as much time as they need at

home, or outside of class and stressful environments like school, to tape record their oral

presentations that the teacher can either play for the entire class or listen to privately.

There are many other ways besides just written and spoken language that tics can

interfere with the TS student's classroom experience, and there are several ways that

teachers need to be prepared to help a TS student manage their tics at school aside from

situations like oral presentations.

Behavior Management

Tics or twitches are the common trademarks or symptoms of Tourette Syndrome.

Therefore, the management of tics must be considered when thinking about how to help a

TS student succeed in the classroom. Also, many symptoms of Tourette Syndrome are

similar to those of ADHD, and many students that suffer from TS may also have ADHD

as an entirely separate disorder as described previously. Therefore, management of

ADHD like behaviors such as inattention and hyperactivity are also of importance for teachers to manage for the TS student's success. The first area of behavior management, tic management, is in fact possible even though tics are involuntary. Wilson and Shrimpton (2003) describe that children can try to stop their tics, or hold them in, but it requires an extremely large amount of energy, making concentration even more difficult, and causing even further stress, which would in turn make the student want to tic more or have self-doubt. For example, in Wilson and Shrimpton's (2003) research one TS student named Amy stated in response to being asked if she ever holds her tics back "No-I just let them happen, because if I hold them back, they will build up, then start like and explosion" (p. 8). There are definitely more productive ways for students to use their energy in school, such as on assignments, rather than in trying to not tic or on being embarrassed once they finally let out an explosion of tics. It is for all of these reasons that it is not suggested that any teacher try to tell their TS students to try to suppress their tics.

There are however, many ways that teachers can help their students to better manage their tics in the classroom. First and foremost, as Wilson and Shrimpton (2003) state, it is incredibly important to ignore tics that are not disruptive to the class. If every single minor tic is addressed individually, the teacher's intervention will become more of a nuisance to the class and the TS student as well. Next, is to be sure to allow the TS student to somewhat self-monitor their tic needs (Jones & Johnson, 1993). The student needs to be able to determine when they need help, when they need to be excused from the classroom, or when they are perfectly content with where they are so that they are in control of their education and overall school experience (Jones & Johnson, 1993). It is important though that there is a place for the student to go in the classroom in order to

have some privacy when they need to release their tics or to relax when in a stressful tic-causing situation. Therefore, as Prestia (2003) writes, the teacher should create a private area that the TS student can access at any time of the school day when they need to release tics. As Jones and Johnson (1993) state, this also means allowing the TS student a certain amount of freedom to move around the room as they need to throughout the day. Prestia (2003) further suggests that in this particular area there be soothing items such as pillows, bean bags, soft rugs, relaxing books, or perhaps relaxing music with headphones that the child can silently listen to when they need to calm down and/or release tics. Teachers can even go above and beyond requiring the child to learn to relax on their own. Teachers instead as Chowdhury and Christie (2002) suggest, can teach TS children relaxation techniques early in the school year, such as guided positive imagery, that they can use to release stress and tics when they go to their private area. As Connely (1992) learned to help her TS student Mindy with her tic release and needs for privacy, she wrote that Mindy was allowed to go to a private area in the classroom behind some study carrels when she needed to, but also, when Mindy's tics were extremely strong, she was allowed to excuse herself from the classroom and go to the nurse's station to be in private. Knight (1999) suggests that in order to allow students like Mindy to leave the classroom to go somewhere like the nurse's station or another predetermined safe and private place, that teachers can develop secret signals between them and the student that mean they are excused to go if they need to. Such signals could be something as simple as placing a pencil on the student's desk as the teacher passes by so that other students do not know there is a problem. Also, as Connors (1994) suggests, if the teacher notices the TS student having particular difficulty managing their tics they can excuse the child to go

run an errand that requires leaving the room so that the student can release their tics while out on the errand. Another method to help TS students manage their tics is to teach what are called tic cover-ups. As Knight (1999) writes, she mentions that tic cover-ups are especially useful for students who have a somewhat inappropriate tic that they need to release such as teaching them to carry a tissue if spitting is a tic they are experiencing, so that they can spit into the tissue. Other suggestions include taking shoes off in the classroom if a foot tapping tic is present, or even simply coughing over a vocal tic when it is needed (Knight, 1999). When test-taking occurs it is best to let the TS student complete the test in a private room, as Connors (1994) writes, so that the student can simply express their tics as needed throughout the test so that they can complete the test as stress free as possible, and so that they do not disturb the rest of the class that is testing. Also, as a reminder, as Knight (1999) mentioned, laborious activities like tests, or core subjects like writing, reading, and math are best scheduled early in the day as tics tend to get worse as stress increases throughout the school day. Lastly, Prestia (2003) suggests that it is extremely helpful when teachers provide or allow a cup of water to be at the desk of a TS student experiencing strong vocal tics as it may help relieve the need to express some tics, and also may help with issue of dry throat as well. All of these ways, weather they help the TS student, or the whole classroom environment as well, are ways to help manage tic behaviors in TS students to better improve their academic success. Also, these management techniques do not require the student to suppress tics in an effort to be someone that they aren't for the sake of their peers.

Another area that TS students often need help in to improve their academic success and also to keep a stable classroom environment as a whole is with ADHD

related symptoms. One main ADHD type symptom that TS students have is difficulty with staying seated in one place for extended period of time or with working on one assignment for long periods of time. There are a few things that a teacher can do to help a TS student with these sorts of behavior issues in the classroom. One thing according to Bronheim (1991) is to offer short breaks in long activities for the student. This can mean anything from switching them to a different activity and bringing them back to the original at another time, or possibly just allowing them to take a couple of walks around the room to have a break. Another suggestion by Prestia (2003) is to break long assignments or projects into shorter segments. This helps to alleviate some of the stress for the student simply by not looking like so much work and causing anxiety about sitting and completing it all, rather it appears to be smaller assignments that you break up for them (Prestia, 2003). Lastly, you can develop work contracts or agreements with your TS and/or ADHD students such as agreeing that if they complete half of the current long assignment, they can then do a fun activity or have a break, if they agree to finish the assignment afterwards, etc (Knoblauch, 1998). Lastly, if extended attention is absolutely necessary, make sure to provide the TS/ADHD child with a squeeze ball or other small object the student can fidget with to help alleviate extra energy (Chowdhury & Christie, 2002). Another issue that develops with ADHD/TS students tends to be an overall problem with being distracted by other stimuli and keeping organized in general. There are three specific ways to help alleviate the problem of being distracted. Bronheim (1991) suggests both seating a child close to the teacher so that redirection can happen quickly and also to not seat a child near distractions such as windows where other things happening could distract them. Chowdhury and Christie (2002) further suggest that any

distractions or extra materials be removed from the child's work space so that they are only free to concentrate on the assignment at hand. This suggestion also leads into the issue of organization. While keeping extra materials off of the student's desk would also help with this, Connors (1994) also recommends color coding assignments on a regular basis for the student so that they can organize them in specific folders to keep them focused and on track throughout the day on the assignment they should be working on. Another helpful way to keep the student both on track and organized is to create a classroom buddy system that is most beneficial when buddies are rotated weekly so that the same student isn't always paired with the TS/ADHD student and everyone gets a helping hand too (Chowdhury & Christie, 2002). Chowdhury and Christie (2002) state that this type of buddy system can help the child stay on track by allowing them to work at the same pace as a partner. Also, a technique Knoblauch (1998) states as beneficial when all else fails, is to create a silent reminder system with the student such as a shoulder tap that will always signify the need for the student to focus on the assignment at hand or to realize what they should be doing. Another large problem for students with ADHD/TS that often prevent them from having academic success is in the area of homework completion. The students often forget what they need to bring home, or are stressed out at home too much to complete all of their homework. Therefore, Connors (1994) suggests creating a homework monitoring system with the TS student to help prevent forgetfulness such as having an extra set of books at home so they don't need to remember to bring it, setting up a time at the end of the day to quietly take their things in the hallway with a checklist from the teacher to make sure they have everything, and also to reduce the length of homework assignments just as they would a classroom

assignment. Lastly, TS and ADHD students work best when they have a familiar routine to work with. As Prestia (2003) states, this helps them to stay on track throughout the day, to know when they will get a needed break for release, etc. Therefore, maintaining a routine is essential to their academic success, and if there must be a change to the routine, letting the student know as soon as possible will help them to better plan their day and self-monitor their actions accordingly (Prestia, 2003).

Socialization

Most people know how important socialization is for any child in school. It is hard to imagine having a successful learning experience in school without any form of social inclusion and support from peers. Jones and Johnson (1993) even go so far as to state that socialization is an actual objective of the educational system itself. Therefore, as any student with special needs, including students with TS, deserves the same educational opportunities as their mainstream peers, one can understand that there may be additional steps a teacher needs to take to ensure social inclusion for a TS student, which would hopefully also foster academic success overall. TS students have claimed feeling as though they are the odd one out when considering peer groups in school and problems like these are important to address (Wilson & Shrimpton, 2001). Also, Wertheim (1994) stated after researching students with TS that nearly all of them reported that they felt some form of isolation in the classroom. Both solving these problems of possible peer exclusion and influencing peer and faculty support of a TS child are important to consider.

Peer exclusion is a problem that can happen often with students that have Tourette Syndrome because their tics and other behaviors make them appear to be different from

their peers. Peer exclusion includes both the frequent bullying of the student that leads to their feelings of not being accepted and/or the deliberate exclusion of the TS child from peer groups without the bullying factor. As far as bullying is concerned, there are definitely many steps a teacher can take to repair or prevent bullying problems. First of all, Chowdhury and Christie (2002) state that the teacher should start a school-wide or even just classroom-wide program to prevent bullying. This program should have a clear action plan that includes routine ways for all staff the handle bullying that should include regular consequences for students who bully, which includes students who bully a TS student for his or her symptoms (Chowdhury & Christie, 2002). Prestia (2003) also states that teachers need to obviously be more vigilant of possible bullying that is unfortunately likely to occur towards TS students. Prestia (2003) continues to write that if a teacher is extra vigilant then problems can be intervened upon quickly, and hopefully deeper damage can be prevented. There are also specific incidences to perhaps be vigilant of when it comes to the bullying of TS students. Knoblauch (1998) for example provides the example of monitoring conversations happening within close proximity of TS students for inappropriate material. The reasoning for this being that a form of bullying that frequently occurs with TS students is when students purposely speak about inappropriate material or make inappropriate gestures near a TS student to trigger instances of echolalia or palilalia (Knoblauch, 1998).

The other problem of flat out exclusion of TS students from their peers social groups or activities is also frequent, but also possibly avoidable if certain actions are taken by a teacher. First of all, according to Chowdhury and Christie (2002), along with Prestia (2003), many TS students lack certain social skills altogether or perhaps

misunderstand the usage of some social skills as well. Chowdhury and Christie (2002) suggest remedying this problem by individually by privately correcting certain social mistakes the TS student may make or by encouraging the use of particular social skills when you see them necessary. Prestia (2003) brings this same advice a step further by also stating that including the use of basic social skills in the curriculum for all students during regular school days can be incredibly helpful for both the TS and other students. An outcome of doing this will hopefully be a more socially competent student that can initiate peer relationships more affectively. However, socialization may still prove difficult.

When TS students still seem to have difficulties in establishing or maintaining peer relationships there are additional steps that can be taken. One step to take that is stated as helpful by Prestia (2003) is trying to help the student establish a group of friends based upon similar interests. An example of this could be that if you notice the TS student having trouble making friends is very interested in or even good at playing soccer, then you can introduce that fact to other children in the class that tend to play soccer at recess or after school. This of course takes a very involved and committed teacher to take notes of these instances, but it will be extremely advantageous for the student. There is another similar step that a teacher can also use to achieve the same outcome. Wertheim (1994) writes that if you praise a TS student for his or her strengths, out loud, in front of their peers, and frequently, that not only will this boost the students self-esteem which will encourage them to be more confident in relationships with others, but it will also highlight the students positive qualities to their peers who may then seek help or even companionship with the student because of their strengths. Connely (1992) wrote that

when she had a TS student in her classroom named Mindy, she often would take advantage of Mindy's great reading ability by partnering her with struggling readers. What resulted as Connely (1992) continued to write was that students complimented and sought out relationships with Mindy based on her reading capability and other qualities the students noticed along the way. Processes like this simply makes it easier for peers of the TS student to notice the positive qualities the student has, rather than consistently blurring these qualities out because the tics or other differences the TS child has may be distracting (Wertheim, 1994).

There is also need for teachers and perhaps other faculty to take steps towards encouraging the student's peers and school faculty to actually support the child, along with assisting them in being included in peer groups, that can help them socially and therefore academically. The first step in achieving the full support of the TS student is strictly informative. Chowdhury and Christie (2002) state that as soon as possible, ideally within the first day of school and then continually as needed, there should be discussions that occur school wide about Tourette Syndrome. These discussions are best when they happen campus wide, but if only the TS students' classes can, then that would be better than nothing (Chowdhury & Christie, 2002). These discussions should provide recent, clear, and factual information about TS (Chowdhury & Christie, 2002). The idea behind these informative discussions is that if everyone that comes in contact with the student is completely informed about what TS is, then they will be more supportive of the child's needs and less judgmental of their behaviors (Chowdhury & Christie, 2002).

Additional methods to encourage the support of TS students include eliciting certain behaviors through example. Wertheim (1994) writes that teachers need to be

aware that their response to certain tics or behaviors of a TS student directly influences the reactions of the student's peers and other faculty members. Therefore, if the teacher is always supportive of the student, by not criticizing his or her tics, highlighting their positive qualities, and providing assistance to the student when he or she needs it, then the other students and faculty will be encouraged to do the same (Wertheim, 1994). Wilson and Shrimpton (2003) add that peers and faculty of the TS student that are perhaps uninformed about or misunderstand Tourette Syndrome will most likely be looking to the teacher as reference to how to handle certain situations with the TS student. Wertheim (1994) also continues by including that when teachers establish caring and supportive communities of students and faculty that everyone benefits from it, and that the community will stick together in time of need to continue to support the TS student, only further benefiting their educational and social life. Connely (1992) wrote that when she was an active informer and supporter of her TS student named Mindy, that the students followed her example, and when someone new like a substitute or other student criticized or misunderstood Mindy's disorder, they were quick to provide explanation for the situation.

Also, there is one more important thing to keep in mind when assisting a TS student with their socialization needs at school. As instances come up of bullying, misunderstandings, or as lack of peer support and/or inclusion occur, the student should be provided with mental health help. Even if the situation is addressed quickly and properly, and will perhaps never happen again, the student should be encouraged to speak with a professional about so that negative feelings and emotions about the TS student's disorder do not build up over time. Wilson and Shrimpton (2001) encourage the use of

the school nurse, counselor, psychologist, or psychiatrist as needed to handle these types

of situations. In this way, hopefully any negative experiences will not hinder the student's

ability to seek ought social relationships in the future, or inhibit their ability to

academically function or behave appropriately afterwards.

SUMMARY

Overall, a goal for all teachers should be to ensure the academic, behavioral, and

social success of all of their students, in order to commit to providing the best educational

experience that they are capable of. Furthermore, as Davidovicz (1994) states, teachers

are specifically required to support the needs of their learning disabled students, which

does include those with Tourette Syndrome. In order for a teacher to help achieve this

goal, and to focus on what specific suggestions mentioned throughout this paper would

benefit their TS student there are important things to consider. Wertheim (1994) writes

that first and foremost any teacher should be sure that if they notice TS symptoms in a

student, that aside from their reaching out to help the student in the classroom

accordingly, it is extremely necessary for the teacher to help the student get a diagnosis

from a medical professional. Once this diagnosis is achieved the next step can be taken to

assist the student in school. The TS student's symptoms and needs will be ever changing,

and not one case of TS is exactly the same for all sufferers (Wertheim, 1994). A way to

help organize the students needs regularly, and to ensure they are getting the proper

attention they need is by having a written Individualized Education Program (IEP) or 540

Plan after the student's diagnosis is made and his or her needs are properly assessed

(Prestia, 2003). This plan should include the steps needed to be taken based upon the

students individual needs in order to help improve daily functioning, and should be

changed accordingly with the student's changing needs (Prestia, 2003). Once the TS

student has an IEP in place, if it includes all of the proper items necessary to assist the

child, hopefully the student's condition will become easier to manage and track

throughout his or her educational career.

It is also important to remember that with TS students, even though as Davidovicz

(1994) writes that about 60% of TS students are estimated to have some form of trouble

in school, that at the same time, according to Wertheim (1994) the student still needs to

have academic challenge because they do not necessarily have a lower IQ than their non-

TS peers just because their TS symptoms making learning more difficult. This is

precisely why it is important for teachers to support the academic, behavioral, and social

needs of their TS students so that they have a better chance at reaching the academic

success they are capable of.

Lastly, there is one more reason to facilitate the needs of TS students and

promoting their educational success: advocacy. TS students are always in need of people

that are willing to be active supporters and advocates of their educational experiences.

Tourette Syndrome is a relatively new disorder to the educational and social systems of

America, with complete understanding of TS as a neurological disorder only occurring in

the early 1970s (Tourette Syndrome Associate, Inc, 2007). The more teachers continue to

work towards improving the educational experiences of their TS students, and to set an

appropriate example for others, the more people will react more supportively of people

with TS, and the more stereotypes of TS will be broken. Improving the education and

image of people with Tourette Syndrome can greatly alleviate the problems that TS

sufferers face in their live, and therefore greatly improve the quality of our society as a whole.

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