



Effects of PANS/PANDAS on Communication: A Review of the Literature and Implications for the SLP



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Abstract

PANS, or Pediatric Acute Onset Neuropsychiatric Syndrome, is characterized by a dramatic onset of neuropsychiatric symptoms such as obsessions, compulsions, tics, depression and anxiety. This syndrome is typically triggered by infections, metabolic disturbances or other inflammatory reactions. PANS is the overall category in which PANDAS falls, with which the trigger is the streptococcal infection. PANS can cause deterioration of a child's school performance. More specifically, the child may suddenly present with ADHD, deficits in memory, and cognitive changes. Speech, language and feeding can be impacted due to the antibodies attacking the brain in response to PANDAS/PANS. A child may suddenly begin stuttering or even develop selective mutism. Because of this, children with PANDAS/PANS are at a higher chance of coming across an SLP's caseload. It is important for the SLP to know the characteristics of PANDAS/PANS in order to make appropriate referrals. Proper diagnosis and medication management can assist in the process of controlling PANDAS/PANS.

What are the symptoms?

In the 1980s, the National Institutes of Health (NIH) discovered a group of children with sudden onset OCD that typically followed infection from streptococcus pyogenes, varicella and Mycoplasma pneumonia. Suspected PANS requires a thorough evaluation of multiple areas: family history, medical history, physical evaluation, psychiatric evaluation, infection disease evaluation, neurological assessment, assessment of somatic symptoms and genetic evaluation (Chang, etc 2015). PANDAS/PANS can be managed by antibiotics, anti-inflammatory drugs, psychotropics as well as cognitive-behavioral therapy (Calaprice, 2018).

Academic	Behavioral	Physical
Loss of Math Skills	OCD	Tics (Motor/Vocal)
Loss of Handwriting Skills	Anxiety	Frequent Urination
Poor Short-term Memory	School Refusal	Unusual Gait
Sensory Aversion	Aggression	Balance Issues
Loss of Focus	ADHD	Feeding
Poor Organization Skills	Inhibition Control	*Increase in symptoms with illnesses

PANDAS/PANS and Special Education

The dramatic onset of symptoms will likely cause an immediate need for academic and educational support. (Fournier 2012). PANDAS/PANS symptoms can appear as quickly as overnight. The special education identification and testing process takes over a month from identification, evaluation, to implementation of the IEP. This can place immense stress on the family. The team working with the child should ensure that they are educated about the nature of PANDAS/PANS symptoms. Pending parent permission, the team should be in contact with the child's health care provider. There should be open communication between the education team and the family. The onset of PANDAS/PANS can cause a financial and emotional strain on families. A common treatment for PANDAS/PANS is experimental immune-based therapy often not covered by insurance. It is important that the school supports the family in any way they can.

It may be appropriate to classify PANDAS/PANS as Other Health Impairment (OHI). It can be hard to predict what level of support a child will need, since simple infections such as the flu can exacerbate symptoms greatly (Doran, 2015). IEPs should ensure that children can access education during flare ups. There should also be plans in place to be able to deal with rapidly changing behaviors. These changes can be behavioral or neurological in nature. Educators should be flexible in their accommodations.

Communication Difficulties



Cognitive functioning in children with PANS/PANDAS is similar to that of children with ADHD/Tourette's (Hirschtritt, 2009). Attention and Inhibition control can be especially difficult for these children. There can also be a change in fluency. There are cases in which a child begins stuttering (Maguire, 2010). In terms of voice, a child may start speaking in a "baby voice" due to regression in age/change in behavior (Maguire, 2010). The SLP may be called upon to help address any of these areas. There can also be sudden onset of sensory aversions and handwriting difficulties which can involve the expertise of the OT (Trujilio, 2017).

Recommended Academic Accommodations

- Extended Test Time
- Read-Aloud
- Graphic Organizers
- Frequent Breaks
- Behavioral Supports
- Attendance adjustments
- Recognizing triggers

It is important to have a behavioral plan that concurs with the family's home plan. Consistency from one flare up to another benefits the child (Thienemann, 2017).

It is important to know when to ask for help! All types of educators will have a hand in treating these children. The child's physician can be a resource in management.

Conclusion

There is not much information available regarding the treatment/management of PANDAS/PANS. Furthermore, there is no widespread research done regarding the specific communicative deficits within the syndrome. For SLPs, it is necessary that clinicians are aware of what areas of functioning may be affected in their clients. Further research is needed regarding the speech and language treatment needs for those with PANDAS/PANS. The management of PANDAS/PANS requires a multi-disciplinary team in order to manage the wide range of symptoms presented (Frankovitch, 2015). It is likely that the SLP will be called to be a part of this team due to the potential cognitive, behavioral and communication changes that accompany PANDAS/PANS.

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