

Physical Manifestations of Selective Mutism in School-Aged Children: A Case Series



Rachel Bush, Student PT; Dana Tischler, PT, DPT
Ithaca College, Ithaca, NY

Introduction

Selective Mutism is a childhood anxiety disorder characterized by the individual's inability to speak or communicate in select settings.¹

Selective Mutism is diagnosed when the following criteria are met:

- (1) the child consistently fails to speak in specific situations, such as at school, despite speaking in other settings;
- (2) lack of communication interferes with educational achievement or social communication;
- (3) duration of mutism is at least 1 month;
- (4) lack of speech is not attributed to lack of knowledge or comfort with the required spoken language;
- (5) mutism is not better explained by a communication disorder or exclusively occurs during the course of another psychotic disorder.²

Prevalence rates vary between 0.3 and 7.1 per 1000 children,³ although accurate population estimates are difficult to ascertain.¹

Selective Mutism is 4 times more prevalent in immigrant populations than native populations and is more common in females than males.³

Clinical Relevance

- Research on the diagnosis/treatment of Selective Mutism in relation to other disciplines is extensive^{4,5}
 - Literature regarding related physical characteristics and physical therapy (PT) management is limited
- The purpose of this case series is to describe the physical presentation of two children with Selective Mutism in school-based PT and how this impacted their functional abilities.

References

1. Selective Mutism. American Speech-Language-Hearing Association. <https://www.asha.org/PRPSpecificTopic.aspx?folderid=8589942812§ion=Overview>. Accessed September 13, 2018.
2. American Psychiatric Association. Selective Mutism. In: Diagnostic and Statistical Manual of Mental Disorders. 5th ed. Arlington, VA: American Psychiatric Publishing; 2013:195-197.
3. Sharkey L, McNicholas F. "More than 100 years of silence", elective mutism: A review of the literature. *Eur Child Adolesc Psychiatry*. 2008;17(5):255-263.
4. Østergaard KR. Treatment of selective mutism based on cognitive behavioural therapy, psychopharmacology and combination therapy - a systematic review. *Nord J Psychiatry*. 2018;72(4):240-250.
5. McInnes A, Manassis K. When silence is not golden: an integrated approach to selective mutism. *Semin Speech Lang*. 2005;26(3):201-210.

Case 1

- 15-year-old Caucasian female with a diagnosis of Selective Mutism
- Communication
 - Limited to facial expressions, gestures, and single word answers at school
 - Used short phrases and a tablet to find words at home
 - Sensitive to loud noises and crowded rooms
 - Did not initiate communication
- No known history of trauma
- Has not received PT services outside of the school district
- One small group PT session for 30 minutes per 6-day cycle

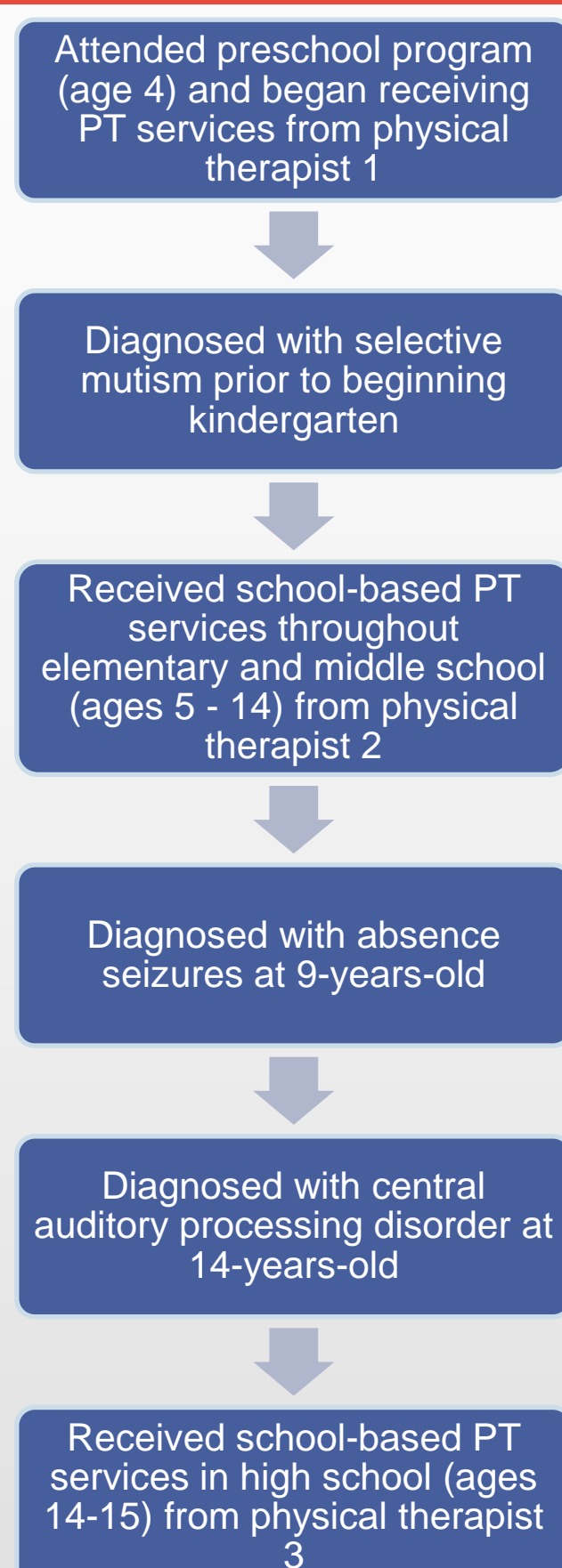


Figure 1: Timeline of diagnoses and physical therapy services for case 1.

Case 2

- 6-year-old Caucasian female with a diagnosis of Selective Mutism
- Communication
 - Limited to nodding/shaking her head, pointing and mouthing words to songs at school
 - Spoke comfortably at home or when family was present
 - Appeared physically anxious (twisting or biting her tongue, fidgeting with her clothes, hands, or glasses)
 - Did not initiate conversation.
- No known history of trauma
- One individual and one small group PT session for 30 minutes each per 6-day cycle

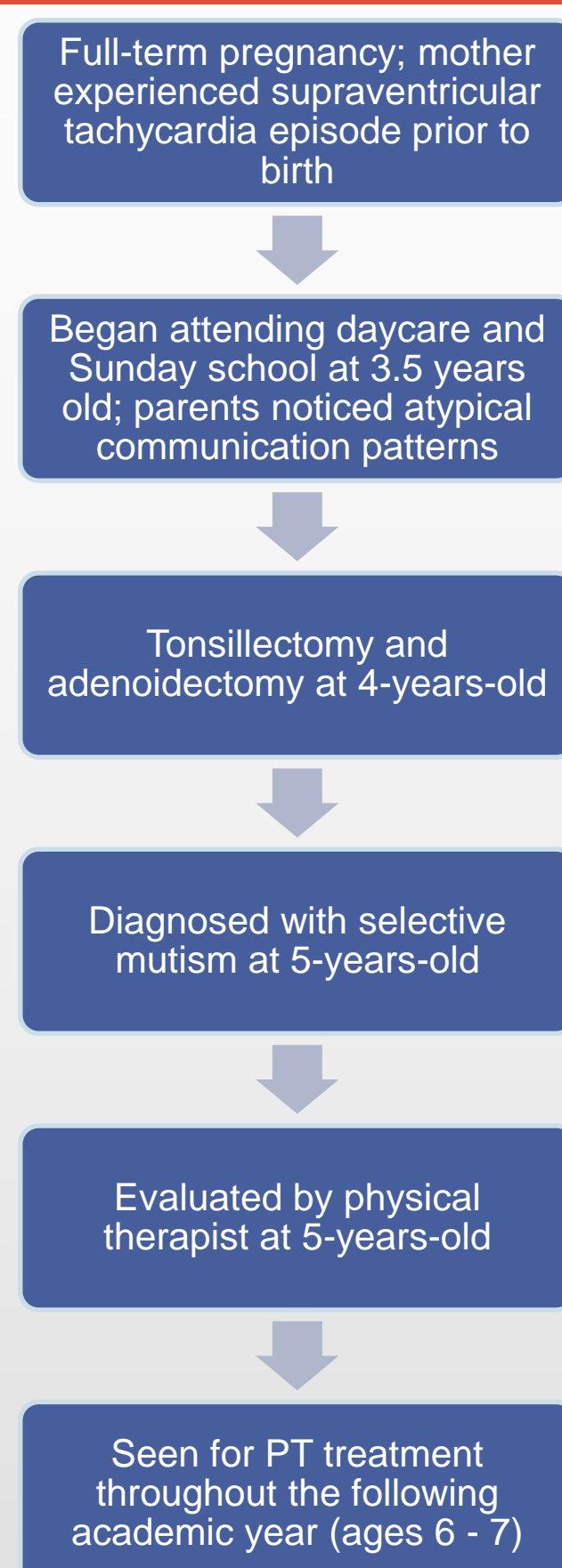


Figure 1: Timeline of medical history and physical therapy services for case 2.

Interventions & Outcomes

Intervention	Posture	Strength	Endurance	Range of Motion/Flexibility	Balance	Coordination	Motor Planning	Other
Animal Walks		○	○					○
Ball Skills						●○	●○	
Bridges		●						
Clamshells		●						
Gallop and Skip			○			○	○	
Hamstring Stretch				●				
Hip Flexor Stretch				●				
Hop/Hop Hop		○	○		○	○	○	
Hop and Jump		○	○			○	○	
Hula Hooping			●	●		●		
Inflate Balloons								●
Lunges								
Medicine Ball Pass*	○	●○		●○	○			○
Monster Walks		●						
Scooter		●○	●○		●○		●○	
Shoulder IR Stretch				●○				
Sidelying SLR		●						
Squats		●○						
Stepping Stones					○	○		
Wall sits		●						
Yoga	●○	●○	○	●○	●○	●○	●○	●○

Table 3: Interventions used for targeted impairments in Case 1 and Case 2. Abbreviations: IR, internal rotation; SLR, straight leg raise
● Case 1; ○ Case 2
*Case 2 performed medicine ball passes while seated on a peanut ball.

At the end of the 8-week episode of care:

- Case 1
 - Improved lower extremity strength
 - Improvements in posture and ROM were not seen
- Case 2
 - Improved balance and coordination
 - Improved posture was demonstrated immediately post-treatment, however it did not carry over to daily classroom activities

Examinations

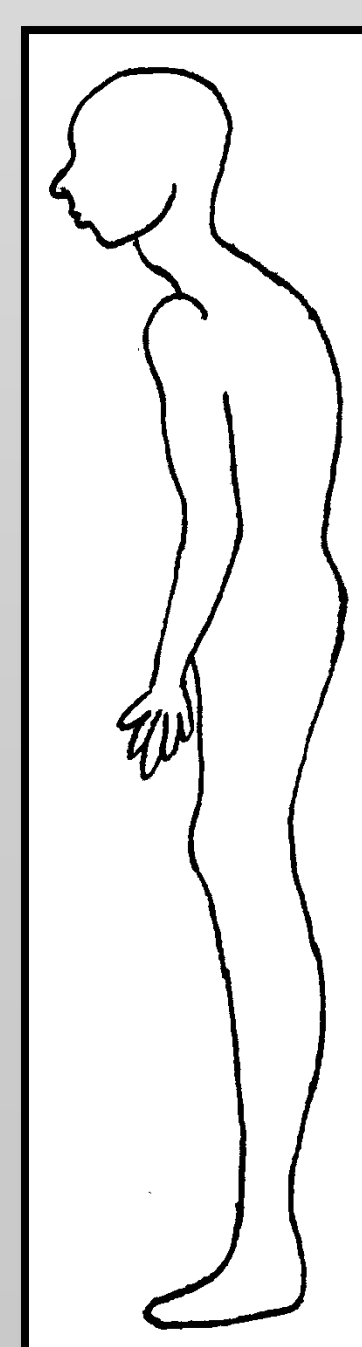


Figure 3: Postural presentation in cases 1 and 2.

Posture

- Protracted scapulae
- Internally rotated shoulders
- Forward head posture
- Increased thoracic kyphosis
- Decreased lumbar lordosis

Additional tests and measures:

- Strength
- Tone
- Endurance
- Postural reflexes (righting reactions and protective extension)

Functional status was assessed using the:

- Bruininks-Oseretsky Test of Motor Proficiency – 2nd edition (BOT-2)
- Observation of the students in the academic environment

Range of motion (ROM)

Joint Motion	Case 1		Case 2	
	Right Passive Range of Motion	Left Passive Range of Motion	Right Passive Range of Motion	Left Passive Range of Motion
Shoulder Flexion	170°	170°	180°	178°
Shoulder Extension	63°	53°	62°	65°
Shoulder Abduction	166°	140°	180°	180°
Shoulder External Rotation	97°	96°	88°	95°
Shoulder Internal Rotation	98°	100°	95°	93°
Hip Flexion (Knee Bent)	106°	113°	124°	125°
Hip Flexion (Knee Straight)	Not tested	Not tested	55°	54°
Hip Extension	18°	19°	22°	15°
Hip External Rotation	29°	47°	40°	45°
Hip Internal Rotation	46°	34°	50°	54°

Table 1: Passive shoulder and hip range of motion measurements for cases 1 and 2.

Direction of Active Movement	Case 1		Case 2	
	Cervical	Lumbar	Cervical	Lumbar
Flexion	78°	44°	40°	63°
Extension	55°	0°	57°	5°
Right Lateral Flexion	20°	22°	20°	5°
Left Lateral Flexion	25°	25°	30°	2°

Table 2: Active cervical and lumbar range of motion measurements for cases 1 and 2.

Discussion

- Similar physical impairments and participation restrictions in children with Selective Mutism
- Common posture
- Limitations in range of motion, strength, muscle tone, endurance, balance, coordination, and motor planning
- Decreased ability to navigate the school and participate in classroom and playground activities
- Addressing impairments at a younger age may contribute to a better prognosis
- Physical therapists should recognize that children with Selective Mutism may need to be screened for physical impairments

Conclusion

Selective Mutism may be related to common physical manifestations, which impact functional activities in the school environment, and warrant school-based PT services.