

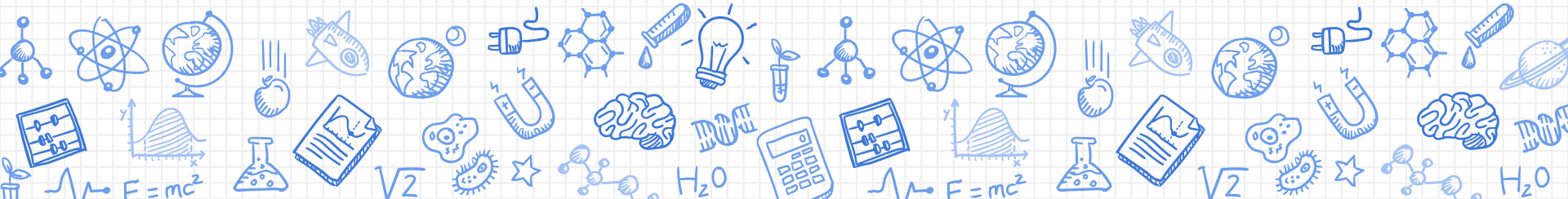
Applied Behavior Analysis (ABA) and Autism Spectrum Disorder (ASD)

Emma Gaffney
Michigan State University



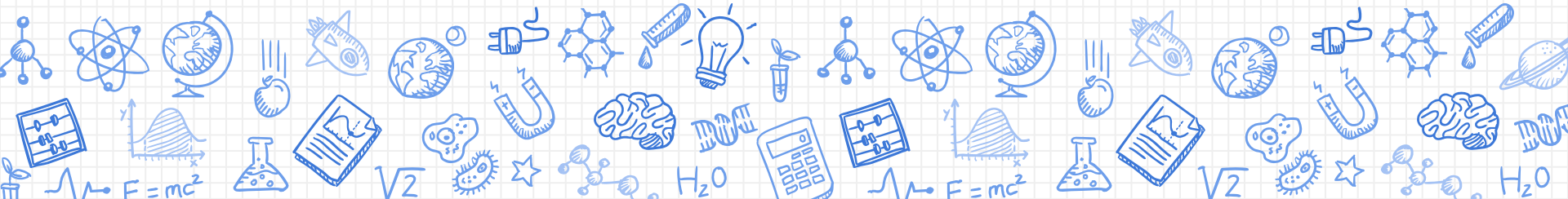
Problem Statement

Why ABA and ASD are important for educators to learn about



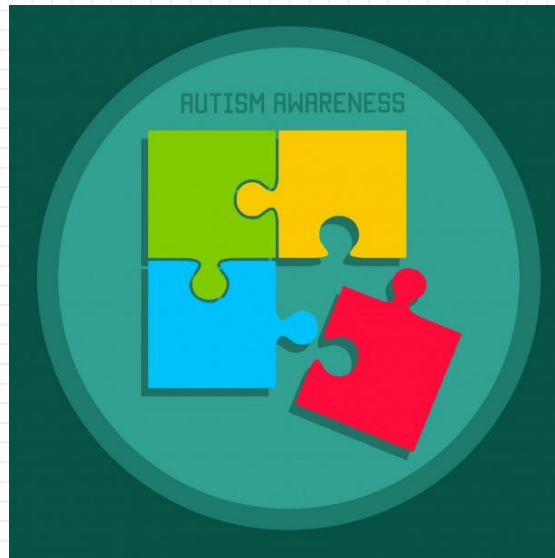
Defentitions

What is ABA and ASD?



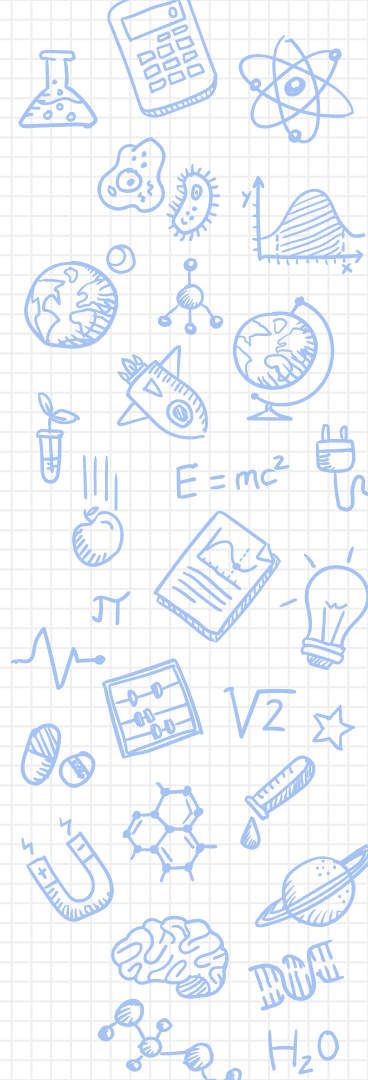
Autism Spectrum Disorder (ASD)

“Autism spectrum disorder (ASD) is a developmental disability that can cause significant social, communication and behavioral challenges”.



ASD Characteristics

- ★ Impairment of social interaction with others
 - Lack of spontaneous seeking to share enjoyment, interests, or achievements
 - Lack of social or emotional reciprocity
- ★ Impairment of verbal and nonverbal communication
 - Using repetitive and idiosyncratic language
 - Difficulty initiating or sustaining conversation with others
- ★ Impairment of social play and imaginative activities and restricted, repetitive, and stereotyped patterns of behavior
 - Preoccupation with one or more restricted patterns of interest
 - Inflexible adherence to specific, non-functional routines
 - Stereotyped and repetitive mannerisms
 - Persistent preoccupation with objects or parts of objects.



Applied Behavior Analysis (ABA)

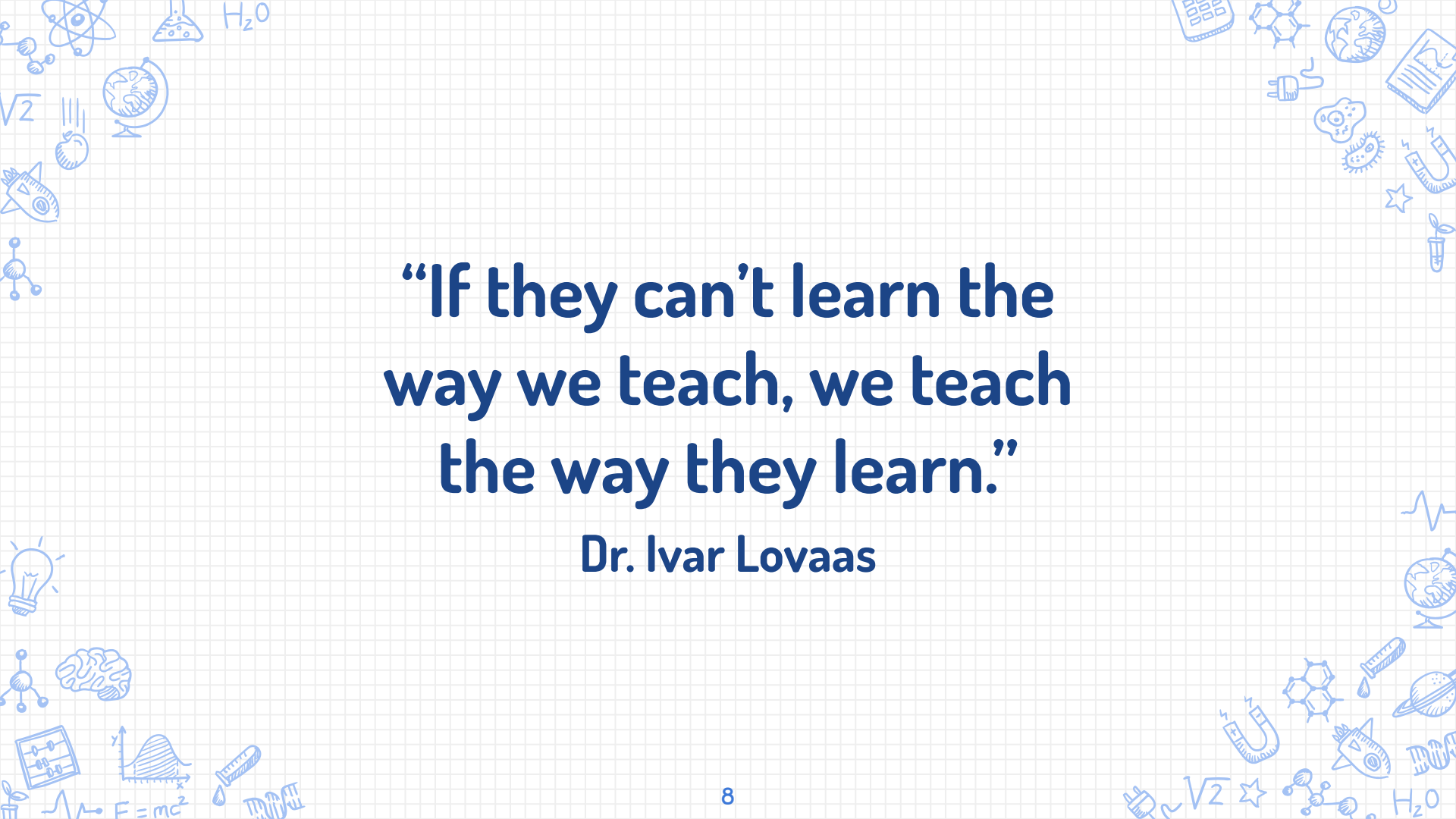
INCREASING **POSITIVE**
BEHAVIOR



DECREASING **NEGATIVE**
BEHAVIOR

“Applied behavior analysis therapy is an application of basic behavioral practices to facilitate the development of language, social interactions, independent living skills and other aptitudes”.



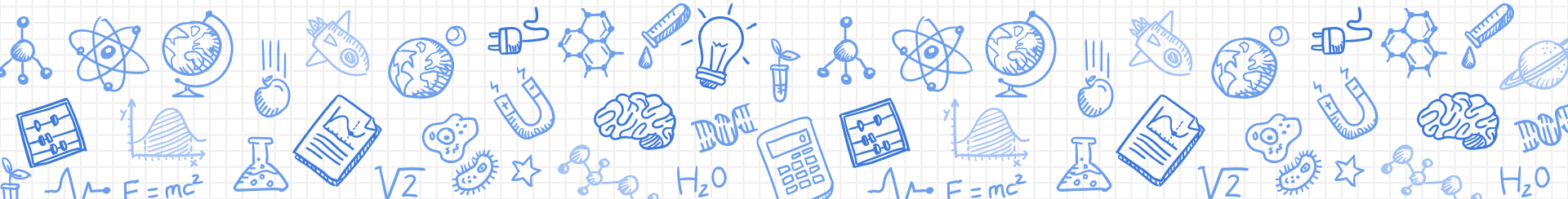
A decorative border of light blue hand-drawn icons surrounds the central text. The icons include a lightbulb, a brain, a globe, a microscope, a test tube, a DNA helix, a rocket, a star, a magnifying glass, a calculator, a book, a cell, a plug, a water molecule (H2O), a square root symbol (√2), a graph, a lightbulb, a brain, a globe, a microscope, a test tube, a DNA helix, a rocket, a star, a magnifying glass, a calculator, a book, a cell, a plug, a water molecule (H2O), a square root symbol (√2), a graph, and a lightbulb.

**“If they can’t learn the
way we teach, we teach
the way they learn.”**

Dr. Ivar Lovaas

Facts and Statistics

Relevant information about ABA and ASD



Students With ASD

- ★ Boys are 4x more likely to be diagnosed with ASD than girls.
- ★ 31% of children with ASD have an intellectual disability, 25% are in the borderline range, and 44% have IQ scores in the average to above average range.
- ★ Children with ASD struggle to display “typical” and expected behavior at school.
 - Sitting in a seat, taking turns, etc.
- ★ “Children with ASD are more likely to display challenging behaviors compared to children with psychopathology, children with learning impairments, children with Intellectual Disability alone, and typically developing children.”
- ★ Early intervention affords the best opportunity to support healthy development and deliver benefits across the lifespan.



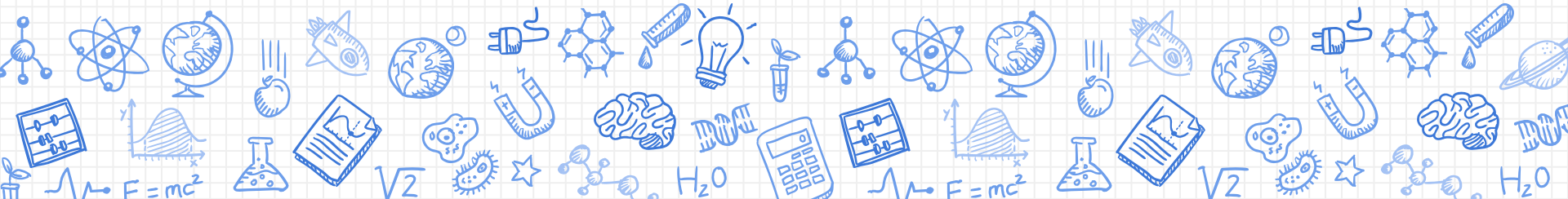
ABA Therapy

- ★ ABA therapy was founded on the scientific principles of B.F Skinner in the 1960's.
 - It has been used as a treatment for children with ASD for more than 40 years!
- ★ Applied behavior analysis and therapies based on its principles are the most researched and commonly used behavioral interventions for autism.
- ★ ABA therapy is proven to be the most effective method to teach children and adolescents with autism spectrum disorder.
- ★ ABA methodology is also effective in decreasing challenging behaviors such as noncompliance, tantrums, bed-wetting, feeding problems, aggression and self-injury.



Application in the Classroom

How can you use ABA therapy in the classroom?



ABA in the Classroom

- ★ Children with ASD can receive ABA therapy...
 - At home
 - At a therapy center
- ★ Only a board-certified behavior analyst can provide ABA therapy, but some of the basic strategies can be used to help classroom teachers who have students with ASD.
 - **Positive Reinforcement**
 - **Antecedent, Behavior, Consequence**
- ★ The main goal of ABA therapy is to increase helpful behavior and decrease behavior that negatively affect learning - I cannot think of a teacher who would not want that to happen in their classrooms!



Positive Reinforcement

- ★ When students display a desired behavior (like sitting in their spot, raising their hand, etc.) teachers can use positive reinforcement to motivate them to continue making that behavior choice.
- ★ Students should be rewarded when they make the desired behavior choice. Make sure that reward is meaningful for that student.
 - For example, if that student loves monster trucks they could pick out a monster truck sticker.

When you raise your hand...



You can pick a sticker!



Reinforcement Example Video



Antecedent, Behavior, Consequence (A-B-C)

Examining A-B-Cs can help us understand why a behavior is occurring, and how a consequence can affect the likelihood of that behavior happening again.

Antecedent

What occurs directly BEFORE the behavior. It could be verbal (command or request), physical (toy, object, lights, etc.), and can also be internal (thought or feeling) or external (from another person).

Behavior

The response, or lack thereof, to the antecedent. It can be physical (an action), a verbal response, or something else.

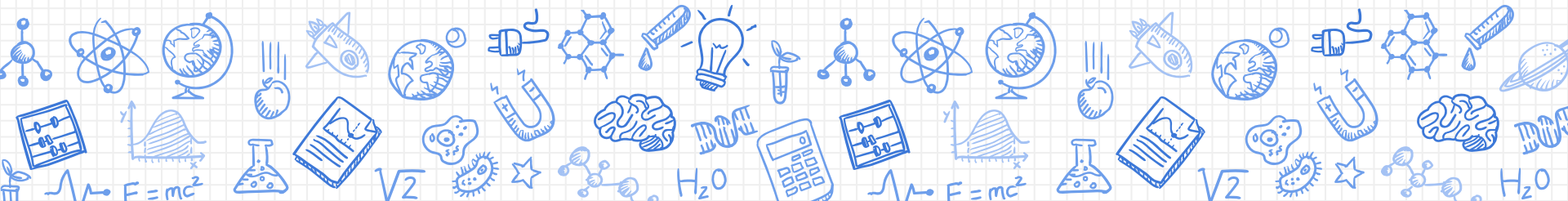
Consequence

What comes directly AFTER the behavior. It can be positive reinforcement (if the behavior is desired), or something else if the behavior is inappropriate.



Conclusion

Why should educators use ABA strategies in their classrooms?



Additional Resources

Allred, D., & Clerkley, C. (2019, June 24). Autism Society. Retrieved from <https://www.autism-society.org/>

Artoni, S., Bastiani, L., Buzzi, M. C., Buzzi, M., Curzio, O., Pelagatti, S., & Senette, C. (2018).

Technology-enhanced ABA intervention in children with autism: A pilot study. *Universal Access in the Information Society*, 17(1), 191-210. doi:<http://dx.doi.org.proxy1.cl.msu.edu/10.1007/s10209-017-0536-x>

Autism Spectrum Disorder. (n.d.). Retrieved July 19, 2019, from

<https://www.nimh.nih.gov/health/topics/autism-spectrum-disorders-asd/index.shtml>

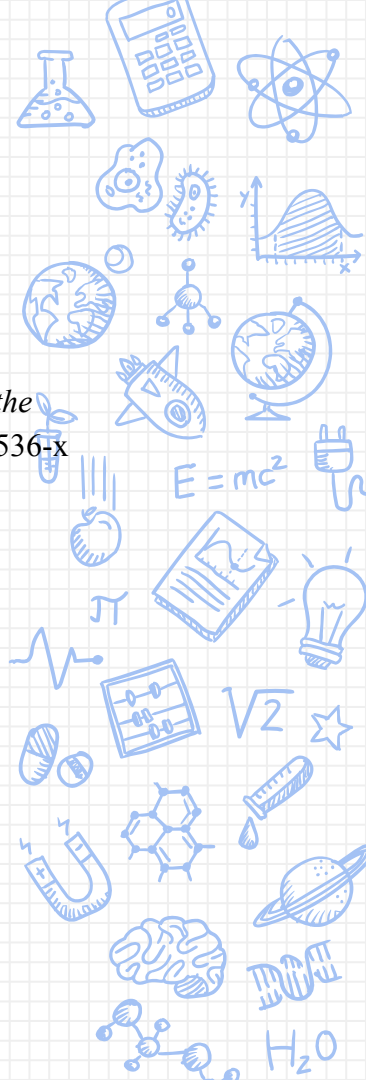
Autism Speaks. (n.d.). Retrieved July 12, 2019, from <https://www.autismspeaks.org/>

Brøsen, S. K. (2006). *Do you understand me? my life, my thoughts, my autism spectrum disorder*. London:

Jessica Kingsley.

Harrower, J. K., Denti, L., & Weber-Olsen, M. (2016). *Educating students with autism spectrum disorder a model for high-quality coaching*. San Diego, CA: Plural Publishing.

National Autism Association. (n.d.). Retrieved July 19, 2019, from <http://nationalautismassociation.org/>



Additional Resources

National Professional Development Center on Autism Spectrum Disorders. (n.d.). Retrieved July 19, 2019, from <https://autismpdc.fpg.unc.edu/>

Smith, T., Mazingo, D., Mruzek, D. W., & Zarcone, J. R. (2007). Applied behavior analysis in the treatment of autism. In E. Hollander, & E. Anagnostou (Eds.), *Clinical manual for the treatment of autism; clinical manual for the treatment of autism* (pp. 153-177, Chapter xxi, 314 Pages) American Psychiatric Publishing, Inc., Arlington, VA. Retrieved from <http://ezproxy.msu.edu.proxy1.cl.msu.edu/login?url=https://search-proquest-com.proxy1.cl.msu.edu/docview/621896169?accountid=12598>

Tincani, M. (2007). Moving forward: Positive behavior support and applied behavior analysis. *The Behavior Analyst Today*, 8(4), 492-499. doi:<http://dx.doi.org.proxy1.cl.msu.edu/10.1037/h0100635>

Total Spectrum. (n.d.). Retrieved July 19, 2019, from <https://www.totalspectrumcare.com/>

Welch, C. D., & Poiatajko, H. J. (2016). Applied behavior analysis, autism, and occupational therapy: A search for understanding. *American Journal of Occupational Therapy*, 70(4), 1-5. Retrieved from <http://ezproxy.msu.edu.proxy1.cl.msu.edu/login?url=https://search-proquest-com.proxy1.cl.msu.edu/docview/1961815073?accountid=12598>

