ADHD MANAGEMENT

Strategies for Adolescents & Adults

Special Learning, Inc.

A Global Leader in Digital Autism Solutions

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Learning Objectives

- Identify appropriate areas of adolescent and adult functioning to address in treatment.
- Identify when referral for services is appropriate for an individual with ADHD.
- Demonstrate 5 evidenced-based behavior management strategies to use with adolescents and adults diagnosed with ADHD.
- Describe the importance of family involvement in management of ADHD in adolescents and adults.
- Select 2 management strategies to utilize in clinic settings when treating ADHD.
- Describe evidence-based medications used to treat ADHD in adolescents and adults, including effectiveness and side effects.

Disclaimer

- This presentation discusses evidence based behavioral treatments for persons with an ADHD diagnosis. Some modalities may or may not be within your perspective scope of practice.
- Do not attempt any treatment modalities in which you have not been formally trained.
- Do not attempt any treatment modalities outside your professional governing body's area of expertise.
- Do not attempt any treatment modalities for which your current legal, license and/or certification does not approve as an effective approach under your profession.
- The modalities expressed in this presentation are for comprehension and knowledge purposes. By increasing understanding, a Minimal Viable Clinician™ (MVC™) can incorporate a more collaborative disciplinary approach, with the goal of achieving more effective, positive outcomes quicker.

Facilitator Bio

Karen Chung, CPA, MBA

Karen is the Founder and CEO of Special Learning. She started the company in 2010 upon learning about the effectiveness of Applied Behavior Analysis (ABA) and the reality that over 95% of the world did not have access to ***quality*** ABA. As an entrepreneur with over 20 years of business experience, she started Special Learning to leverage existing and emerging technology to make quality ABA resources and services available to parents, educators and professionals around the world.

Karen's entrepreneurial experience includes starting and growing a diversity retained executive search firm specializing in placing women and minority executives in leadership positions of Fortune 1,000 companies. Her investment banking background includes working with various venture capital and private equity companies to facilitate deal flow while representing CEOs of rapidly growing companies seeking to raise equity and debt capital for various middle market businesses and commercial real estate developers. Her corporate background includes various leadership and functional roles in Fortune 1,000 and middle market companies. Her additional entrepreneurial activities include owning and operating high end boutique

She graduated with a Masters of Management degree from Kellogg Graduate School of Management of Northwestern University. She is a Certified Public Accountant and a recipient of the Elijah Watts Sells Award from the American Institute of Certified Public Accounts (AICPA).

Presenter Bio

Dr. Ronald T Brown, PhD is a Professor and Dean in School of Allied Health Sciences at University of Nevada, Las Vegas, USA. He served as the Associate Vice-Chancellor for Academic (Health Affairs) at the University of North Texas System. Dr. Brown completed his Ph.D. from Georgia State University and has been the past President of the Society of Pediatric Psychology and the Association of Psychologists of Academic Health Centers. He is a board certified clinical health psychologist and has been an active clinician, teacher, advocate and investigator.

Dr. Brown has served as a member of the Behavioral Medicine study section of the NIH and chaired several special panels at NIH. Dr. Ronald Brown's area of specialization includes behavioral sciences, pediatric psychology, attention deficit disorders, neuropsychology, psychopharmacology, learning disabilities and psychosocial oncology. He is a current editor of Journal of Clinical Psychology in Medical Settings. He served as a previous editor of Professional Psychology: Research and Practice and Journal of Pediatric Psychology.

Presenter Bio

Dr. Deborah Padgett Coehlo, PhD, C-PNP, PMHS, CFLE is a certified Pediatric Nurse Practitioner and Pediatric Mental Health Specialist with a Doctoral Degree in Family Sciences and Human Development.

A developmental and behavioral specialist, Dr. Coehlo is a Founder and Director of Juniper Pediatrics, a clinic modeled after John F. Kennedy's multidisciplinary system of care. Using a holistic, integrated care model, Juniper provides counseling, medication management and family therapy for children with ASD, ADHD and other childhood mental health disorders.
Dr. Coehlo completed her Masters in Nursing with a specialty in parent-child nursing. She spent 10 years working at the Child Development Center at the University of Washington in the Genetics Clinic and Multidisciplinary Clinic. In 1999, she completed her Doctorate degree in Human Development and Family Sciences.

She has continued to teach at the undergraduate and graduate level, and has pursued research in the area of social networking, transition to out of home care for families, and child development. Dr. Coehlo is a co-editor for the 4th and 5th edition of Family Health Nursing (F.A. Davis, 2010/2013) and has published several journal articles in the areas of families choosing residential care, families in transition, family health nursing, and care of children with special health care needs.

Presenter Bio

Mike Marroquin PhD, BCBA-D, New York State Licensed Behavior Analyst
Franklin Square School District, New York

Dr. Michael “Mike” Marroquin, is an Autism graduate & undergraduate professor at Queens College (CUNY). He also is a practicing consultant for families and school districts in New York. His is passionate about making behavior analysis accessible to students in public school settings. He specializes in parent and staff training on the use of ABA methodologies in both home and school settings to provide students with a consistent set of expectations in both environments.

Dr. Mike currently Supervises BCBA® applicants and state licensure applicants in public school settings. As a behavior analyst, he uses ABA to teach behavior analysis in higher education, school and home.

Review of Facts

•ADHD is one of the most common neurodevelopmental disorders diagnosed in childhood and adolescents

- Prevalence rates estimate that 5% to 8% of children, adolescents, and adults in the United States are diagnosed with ADHD
- Symptoms broadly include difficulties in these following areas:
  - Attention
  - Focus
  - Concentration
  - Hyperactivity
  - Impulsivity
  - Poor executive function skills
- Symptoms are considered chronic and persist throughout adulthood.
- Symptoms are pervasive and occur across settings, and across time.

BACB Ethics Code Mandates Appropriate Referrals and Collaboration

1.02 Boundaries of Knowledge

2.03 Consultation

(a) Appropriate consultations and referrals

(b) Cooperate with other professionals

2.09 Treatment/Intervention Efficacy

(a) Clients have a right to effective treatment (i.e., based on the research literature and adapted to the individual client). Behavior analysts always have the obligation to advocate for and educate the client about scientifically supported, most-effective treatment procedures.

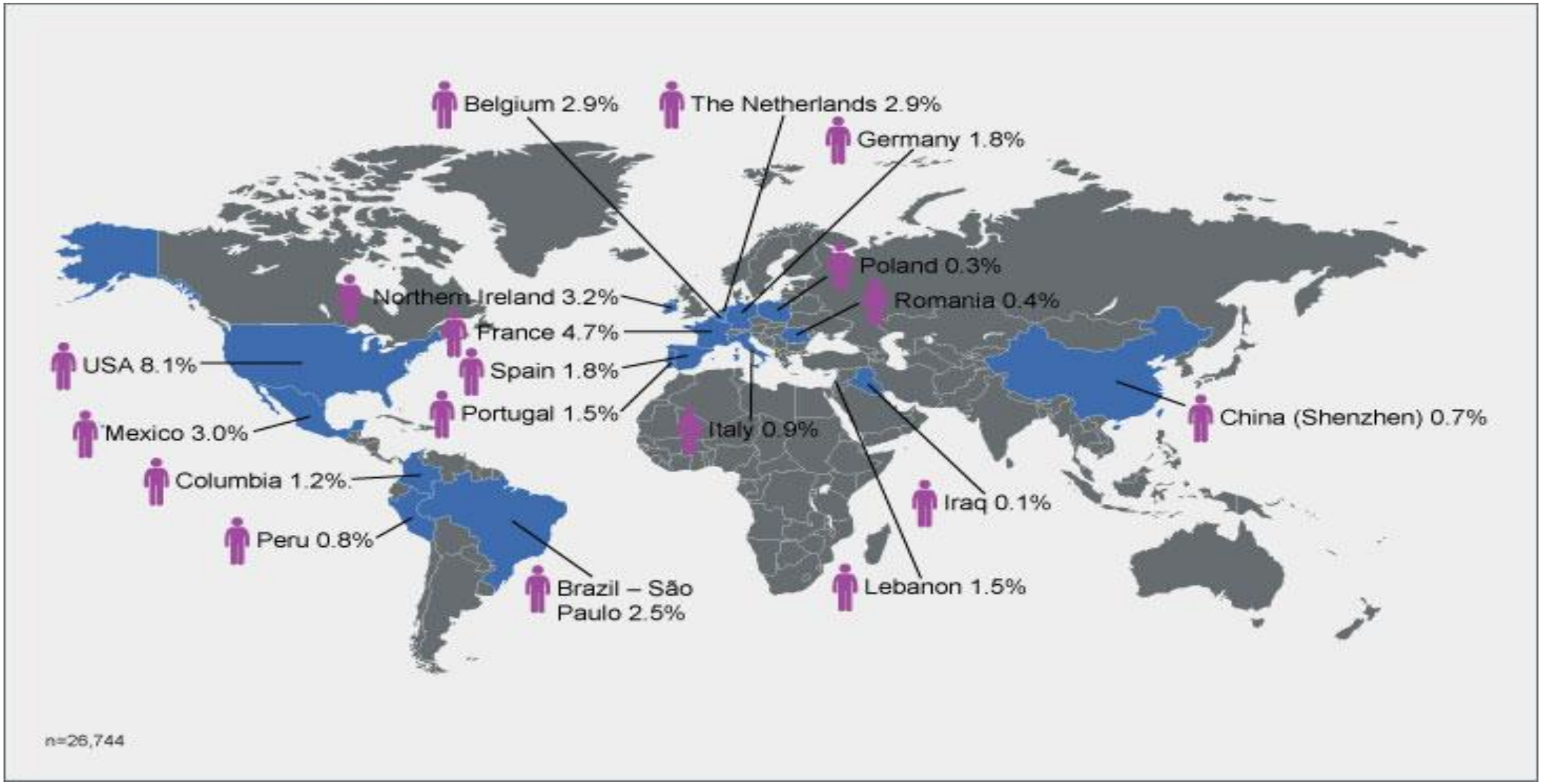
3.02 Medical Consultation

Behavior analysts recommend seeking a medical consultation if there is any reasonable possibility that a referral behavior is influenced by medical or biological variables.

7.0 Behavior Analysts' Ethical Responsibility to Colleagues

Behavior analysts work with colleagues within the profession of behavior analysis and from other professions and must be aware of these ethical obligations in all situations.

Global Prevalence Rates of ADHD



Source: Fayyad J et al. Atten Deficit Hyperactivity Disorder 2017; 9: 47-65.4

ADHD Persists into Adulthood in 50-65% of Patients

- Overall, 4.4% of adults have a diagnosis of ADHD.
- The lifetime prevalence rate for adults in the U.S. is 8.1%
- ADHD presents with co-morbidities (autism, concurrent depression, anxiety, learning disabilities, and PTSD)
- More common in males compared to females
- More common in non-Hispanic whites and African Americans
- More common with severe symptoms


Depression


Anxiety


Autism


PTSD

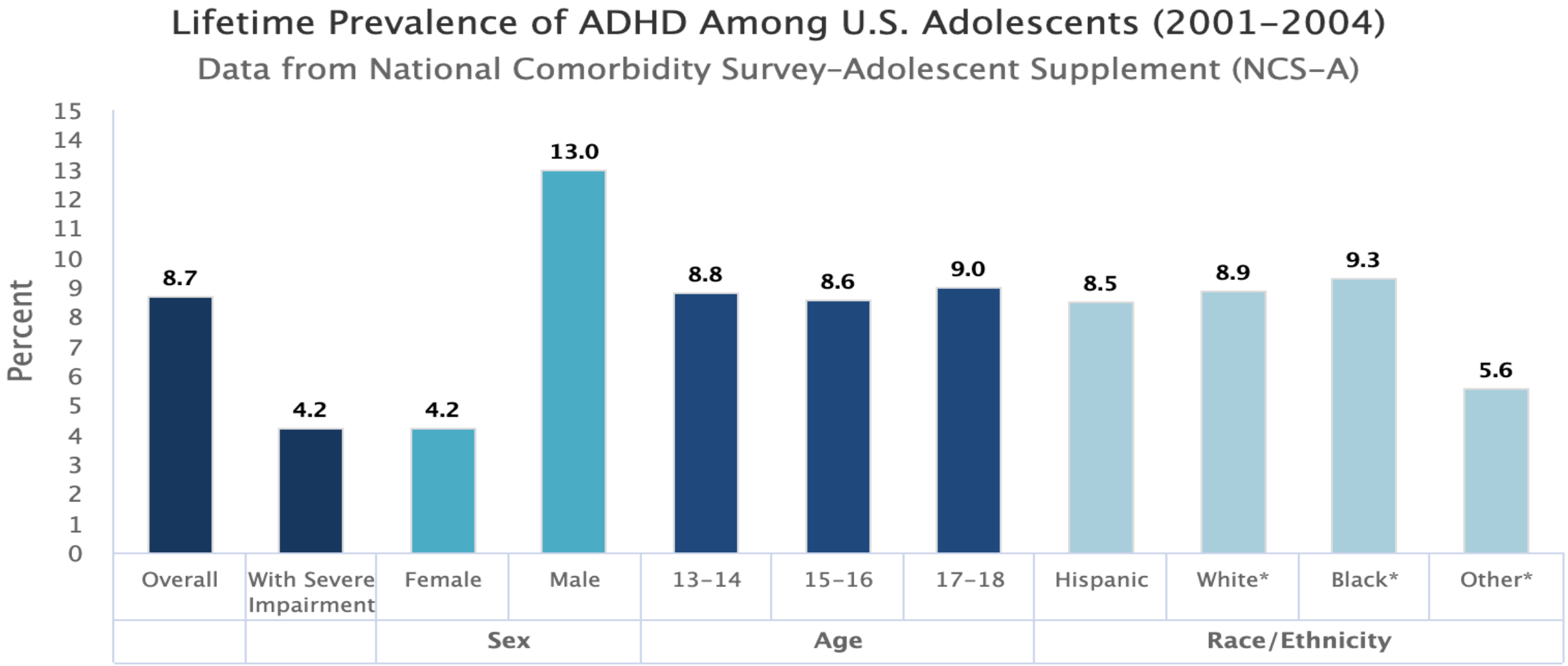

Males


Caucasion (non-hispanic)


Severe symptoms


Learning disabilities

Lifetime Prevelance Rate Across U.S. Demographics



Symptoms/Behaviors of ADHD in Adolescents and Adults

FOCUS	CONCENTRATION	HYPERACTIVITY	IMPULSIVITY	POOR EXECUTIVE FUNCTIONING SKILLS
Hyper focus (i.e. perseveration on one task until complete without regard for daily living activities)	Difficulty with concentration (i.e. move from one task to another without completing the first)	Restless/fidgeting (i.e. seeking external and/or internal stimulation)	Risk taking behaviors (i.e. engaging in unprotected sexual activity)	Excessive talking (i.e. continue to speak about a subject and peers present as not interested)
Procrastination (i.e. initiates imperative tasks right before or after a due date for task)	Become bored easily (i.e. may look-off/ "space- out" during tasks)	Difficulties with relaxing (i.e. engages in "constant" body movement and physical body and/or mental break are not achieved)	Thrill seeking behaviors (i.e. driving a motorcycle on busy highway at 150 mph [241.4 km/h] without a helmet)	Emotional difficulties (i.e. low self-esteem, depression, anxiety, low levels of motivation, hypersensitive to criticism)

Functional Impairments in Adolescents and Adults with ADHD

- Social Impact and Function if not addressed
  - Academic difficulties
    - (History of lower test scores and grades compared to peers)
    - Similar difficulties in higher education
  - Difficulty maintaining healthy relationships
    - Friendships
    - Romantic relationships
  - Difficulty maintaining long-term employment
    - Career longevity vs bouncing from job to job

5-Minute Break/Intermission

Living with ADHD

- The person with ADHD knows what to do, but cannot do it as easily as others
  - Symptoms of ADHD are not due to a lack of understanding
  - People surrounding an individual may or may not understand
- ADHD impacts all areas of executive functioning
  - Daily living skills that require executive functioning are more difficult
    - Nonverbal working memory
    - Internalization of Speech (verbal working memory)
    - Self-regulation of affect/motivation/arousal
    - Reconstitution (planning and generativity)
- Teaching skills alone is inadequate
  - Environmental changes are essential
  - Practice working memory (evidence is incomplete)
  - Delayed consequences do not work, due to distorted time

    (Note: Social consequences are often delayed)

Case Study

Tanya is a 23-year-old with ADHD and mild intellectual disability who is working as a Barista. Her supervisor's 90-day review notes include comments like "she is often spacing out" and "becomes angry with co-workers and customers quickly". Tanya has been involved in three verbal altercations (1 with a co-worker and 2 with customers at the establishment).

The BCBA meets with Tanya and her circle-of-supports at her home and Tanya discloses that she did not share her ADHD or other diagnoses with her employer. Her circle-of-supports reports that medication was recommended by the psychiatrist but Tanya refuses to take the medication because of her own negative experiences with medication to treat ADHD as a child (stopped at age 9).

Tanya comments that she would rather drink beer and engage in cocaine use at parties then take ADHD meds. She believes that she is the "stupidest" Barista at her job because she forgets ingredients when making specialty drinks, and someone must always help her finish it.

What would be the most effective way to address this?

Treatment Overview

- Treat co-occurring conditions
- Focus on management of symptoms
  - Medication Management
  - Provide education on the causes and treatment of ADHD
  - Build skills by addressing Executive Functioning therapies
  - Implement simple Behavioral Strategies
    - CBT
    - DBT
    - Behavior Analysis
  - Implement comprehensive ABA Program

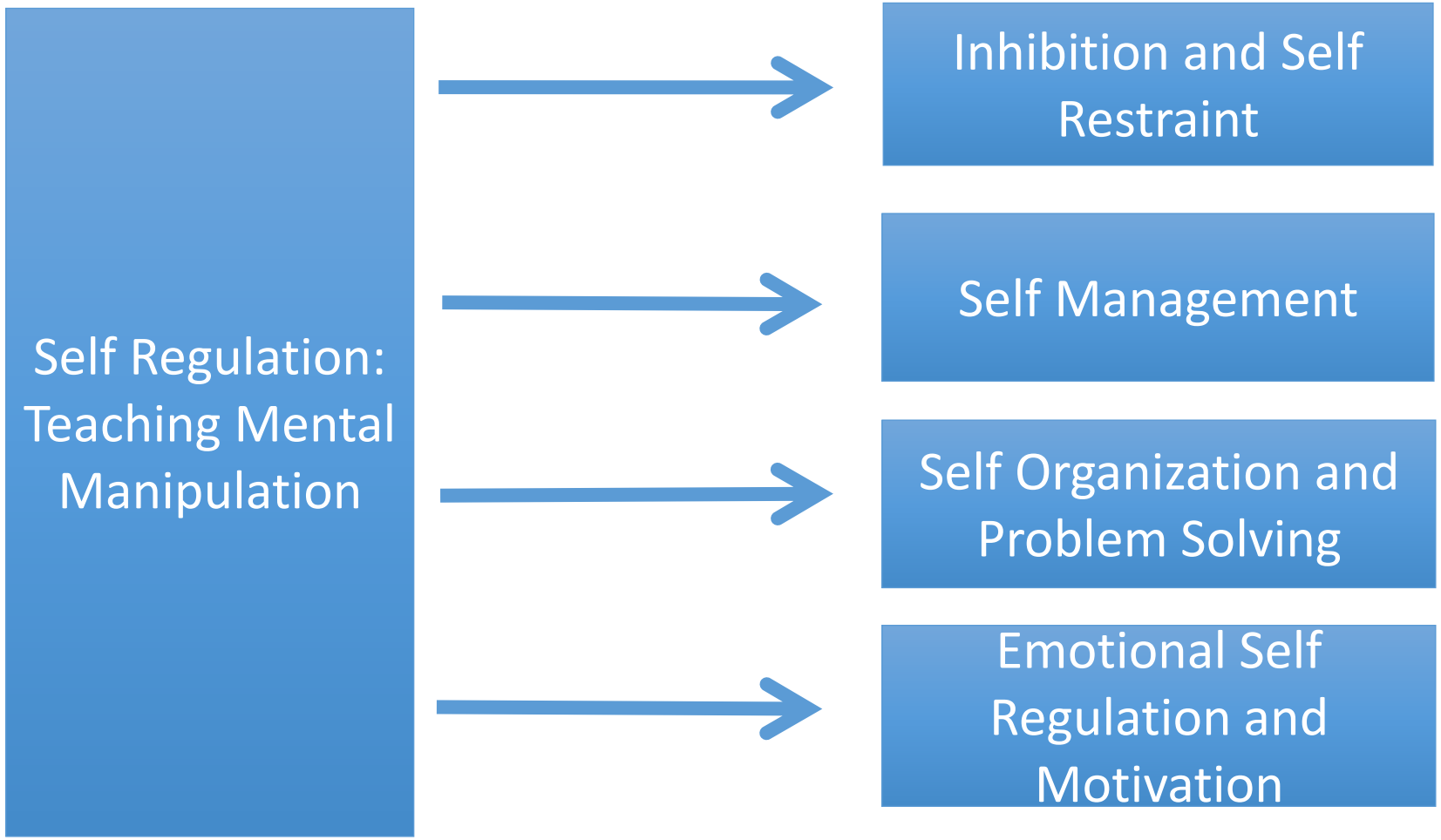
Importance of Executive Functioning

Umbrella term used to describe the “chief operating system” localized in the prefrontal regions which includes higher level cognitive processes necessary for future oriented, **goal-directed behavior.**

Common Impairments

- Inhibition
- Emotional Control
- Initiation
- Working memory
- Planning/Organization
- Problem Solving
- Self-Monitoring
- Self-Regulation
- Motivation

Executive Functioning Treatment



Research Says…

Application of ABA in Treatment of ADHD

ABA in the Treatment of Attention Deficit and Hyperactivity Disorders

Applied behavior analysis is used in the treatment of attention deficit disorder and attention deficit/hyperactivity disorder by (1) instituting behavioral changes to help make the socially disruptive symptoms less prominent and (2) to allow patients to function more easily and with greater success in both public and private settings.

- It is estimated that 80% of children diagnosed with ADHD exhibit a variety of behavior problems (Cantwell & Baker, 1991).
- Most effective strategy to decrease or eliminate behavior problems is to develop an intervention based on the identified function of the behavior (Carr & Durand, 1985).
- Peer attention can be a functional reinforcer for some children with ADHD, and the use of peer-mediated interventions can decrease behavior problems for these children (e.g., Flood, Wilder, Flood, & Masuda, 2002)

Source: https://www.appliedbehavioranalysisedu.org/add-and-adhd/

Behavioral Research Results (Rappaport, et al., 1982)

Ritalin vs. response cost in the control of hyperactive children: A within-subject comparison (Mark D Rapport, H. Allen Murphy, Jon S. Bailey)

Comparison of effects of methylphenidate (Ritalin) and response cost in reducing the off-task behavior of two boys, 7 and 8 years of age, who had been diagnosed as having an attentional deficit disorder with hyperactivity.

Several dosages of Ritalin** (5 to 20 mg/day) were evaluated with the results indicating varying effects of the drug for both children. Response cost *(with free-time as the reinforcer)* was superior to Ritalin in raising levels of on-task behavior and in improving academic performance.

Response cost program was implemented on days 44 and 50 in Brian's phonics and math assignments, respectively, and resulted in unprecedented levels of academic performance.

Both response cost and stimulant medication (methylphenidate) were effective in increasing on-task behavior and academic performance.

The greatest improvement in on-task behavior and academic performance for both children occurred during response cost.

** Recommended dosage has evolved over time

Source: Journal of Applied Behavior Analysis 15(2):205-16 · February 1982

Behavioral Research Results (Sibley et al., 2011)

Study conducted by (Sibley et al., 2011) of 19 adolescents with ADHD (age range: 11-16) who participated in an 8-week intensive Summer Treatment Program–Adolescent (STP-A) during the summer of 2009. The program was developed to address specific difficulties associated with ADHD in adolescence.

STP-A was a behavioral day treatment program for adolescents with ADHD. Adolescents attended the program daily from 8:00 a.m. to 5:00 p.m. and participated in remedial skills training in: academics, organization, vocational training, and social relations.

Findings:

- Almost all adolescents who attended the STP-A benefitted from the program according to parent, self, and staff ratings and objective measures.
- All parents indicated that both they and their children benefitted from the program.
- All but 1 parent indicated that the STP-A was more effective than the treatments they had utilized in the past.

Participants showed moderate improvement in each of the 6 domains targeted by treatment:

1. Conduct problems
2. Adult-directed defiance
3. Social functioning
4. Inattention/disorganization
5. Mood/well-being
6. Academic skills

Source: Cognitive and Behavioral Practice 18(4):530-544 · November 2011

Common Medications Used to Treat Adolescents & Adults

Methylphenidate	Amphetamine Salts	Other
Immediate release	Immediate release	Wellbutrin (Bupropion) (Note. Black Box warning).
Extended release	Extended release	Strattera (Atomoxetine) (Note. Black Box warning and longer time until effects are seen)
Dexmethylphenidate	Vyvanse (lisdexamfetamine dimesylate)	Kapvay (Clonidine) and Intuniv (Guanfacine)
Methamphetamine (Note. This is ***NOT*** the same as the illegal drug)	Mydayis (mixed salts of a single-entity amphetamine product)	

How to Choose Medication

- FDA indications
- Route of administration
- Duration of action
- Cost
- Insurance coverage
- Social stigma

When to Start Medication

- Start low and go slow
  - Start with immediate release and determine most effective dose with the fewest side effects.
  - Start with stimulant medications (most effective)
  - If this medication does not appear to be effective, consider another class/category of medication
- Treat co-morbid conditions
  - Atomoxetine can also help reduce anxiety
  - Clonidine can help with insomnia
  - Bupropion can decrease symptoms of depression

Side Effects of Medication

- Appetite suppression
- Insomnia
- GI Distress
- Headacehe
- Elevated blood pressure
- Elevated heart rate
- Agitation or mood disturbance
- Increase in tics in those with Tourette's disorder
- ***Note:*** Many side effects may subside with adjustments in meal schedule and relationship to meals

Summary

- ADHD often continues into adulthood.
- Treatment outcomes are best when medications are combined with education about ADHD, executive functioning interventions, ABA strategies and techniques, ancillary behavioral intervention and medication.
- Individuals who receive intervention do better in relationships, employment, and life.
- Individuals who are not treated are at higher risks for low education, job loss, drug use, and relationship failures.
- Up to ***90%*** of adults with ADHD are undiagnosed and untreated.

References

Barbaresi WJ, Colligan RC, Weaver AL, Voigt RG, Killian JM, Katusic SK. Mortality, ADHD, and psychosocial adversity in adults with childhood ADHD: a prospective study. Pediatrics. 2013 Apr;131(4):637-44. PMID: 23460687

Barkley, R. (2012). ADHD: Burnett Lecture.

Biederman, J., Petty, C. R., Fried, R., Doyle, A. E., Spencer, T., Seidman, L. J., et al. (2007). Stability of executive function deficits into young adult years: A prospective longitudinal follow-up study of grown up males with ADHD. Acta Psychi- atrica Scandinavica, 116, 129–136.

CHADD. (2019). About ADHD. https://chadd.org/about-adhd/general-prevalence/

Cohrs, C. M., Shriver, M. D., Burke, R. V., & Allen, K. D. (2016). Evaluation of increasing antecedent specificity in goal statements on adherence to positive behavior-management strategies. *Journal of Applied Behavior Analysis,49*(4), 768- 779.

Dodson, W. W. (2005). Pharmacotherapy of adult ADHD. Journal of Clinical Psychology, 61(5), 589–606. https://doi-org.ezproxy.proxy.library.oregonstate.edu/10.1002/jclp.20122

Drechsler, R., Brandeis, D., Foldenyi, M., Imhof, K., & Steinhausen, H.C. (2005). The course of neuropsy- chological functions in children with attention deficit hyperactivity disorder from late childhood to early adolescence. Journal of Child Psychology and Psychi- atry, 46, 824–836.

References

Fleming, A., & McMahon, R. (2012). Developmental Context and Treatment Principles for ADHD Among College Students. Clinical Child & Family Psychology Review, 15(4), 303–329. https://doi-org.ezproxy.proxy.library.oregonstate.edu/10.1007/s10567-012-0121-z

Gailliot, M. T., Baumeister, R. F., DeWall, C. N., Maner, J. K., Plant, E. A., Tice, D. M., et al. (2007). Self-control relies on glucose as a limited energy source: Willpower is more than a metaphor. Journal of Personality and Social Psychology, 92, 325–336.

Halperin, J. M., Trampush, J. W., Miller, C. J., Marks, D. J., & Newcorn, J. H. (2008). Neuropsychological outcome in adolescents/young adults with childhood ADHD: profiles of persisters, remitters and controls. Journal of Child Psychology & Psychiatry, 49(9), 958–966. https://doi-org.ezproxy.proxy.library.oregonstate.edu/10.1111/j.1469-7610.2008.01926.x

NIH. (2017). Attention-Deficit/Hyperactivity Disorder (ADHD). https://www.nimh.nih.gov/health/statistics/attention-deficit-hyperactivity-disorder-adhd.shtml

Seidman, L.J. (2006). Neuropsychological functioning in people with ADHD across the lifespan. Clinical Psychology Review, 26, 466–485.

UPMC. (2019). Treatment for ADHD in Children, Adolescents, and Adults. https://www.upmc.com/services/behavioral-health/adhd-across-the-lifespan/treatment-of-adhd

Wigal, S. B. (2009). Efficacy and safety limitations of attention- deficit hyperactivity disorder pharmacotherapy in children and adults. CNS Drugs, 23(Suppl 1), 21–31.

Xu, Guifeng et al. (August 2018). Twenty-Year Trends in Diagnosed Attention-Deficit/Hyperactivity Disorder Among US Children and Adolescents, 1997-2016. JAMA Network Open. 2018;1(4):e181471.

Thank you for attending Special Learning's

ADHD Webinar Series
ADHD Management: Strategies for Adolescence & Adults

Next and Final Session in the ADHD in Series:

ADHD Strategies: Family Training and Involvement (LIVE 8/14/2019)

Thank you to the wonderful Special Learning team members without whom our experience would be greatly diminished (or just plain disorganized!)

- *Ann Beirne, BCBA, (ACE Coordinator and Moderator)*
- *Krystal Larsen, BCaBA, Director of Clinical Solutions (Moderator and Clinical Support)*
- *Michelle Capulong (Client Support Manager)*
- *Pia Agsao (Client Support)*
- *Sasho Gachev (Creative Director)*

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Simple ABA Strategies (Train Parent/Teacher/Caregiver)

- **TEACH SELF-MONITORING TECHNIQUES TO CLIENTS**
- Preference assessment
- Identification of reinforcement(s)
- Antecedent Strategies
- Shaping
- Reinforcement strategy
  - Frequency (high magnitude)
  - Dense schedule (fixed ratio or fixed interval)
- Token economies and Points Systems with carry-over across settings
- Structured environment (routine)
- Transition

Self-Management Behavior Strategies (Teach Client)

- Identification of reinforcement(s)
- Antecedent Strategies
- Task analysis
- Shaping
- Reinforcement strategy
  - Frequency (high magnitude)
  - Dense schedule (fixed ratio or fixed interval)
- Token economies and Points Systems which carry-over across settings
- Functionally equivalent replacement behaviors
- Structured environment (routine)
- Transition

ABA Strategies (ABA /Behavior Intervention Programs)

- **TEACH SELF-MONITORING TECHNIQUES TO CLIENTS**
- Peer Mediation Strategies
- Preference assessment
- Identification of reinforcement(s)
- Antecedent Strategies
- Task analysis
- Shaping
- Reinforcement strategy
  - Frequency (high magnitude)
  - Dense schedule (fixed ratio or fixed interval)
- Prompting (visual and/or auditory) and prompt fading
- Token economies and Points Systems which carry-over across settings
- Response cost (begin with functional, non-aversive procedures)
- Functionally equivalent replacement behaviors
- Structured environment (routine)
- Transition

Benefits of Medication Intervention

1. The therapeutic effects of the stimulants begin almost immediately (about an hour after initiation of medication.

2. Medication involves less effort on the part of the teacher and the caregivers (parents).

3. The stimulant medication used to manage children with ADHD has also been found to have a contagion effect whereby the medication improves other children's behavior in the classroom and also has the effect of making teachers exhibit less controlling behaviors in the classroom.

4. The evidence-base for the stimulants is one of the best documented therapies in the entire field of child psychiatry.

5. The safety profile of the stimulants have been well documented over the past many years.

Benefits of Behavioral Intervention

- Highly effective when combined with with medication management
  - Medication and behavioral strategies are ***not*** mutually exclusive
  - Evidence shows that using both medication ***and*** behavioral strategies results in best outcomes
- Learning new skills is a long-term treatment
  - Self-management techniques
  - Self-advocacy
  - Coping strategies
  - Communicating behavioral acesses and deficits to others
- Even if changes or problems with medication occur what was learned is still there
- Skills taught in childhood or adolescence are available as an adult
- Simple behavioral intervention strategies and techniques can be taught to family and teachers who work with persons with ADHD
- Simple behavioral intervention strategies and techniques can be learned by individuals with ADHD (benefits of learning self-management skills has a “ripple” effect)

Combined Benefits of Using Both Medication *and* Behavioral Strategies

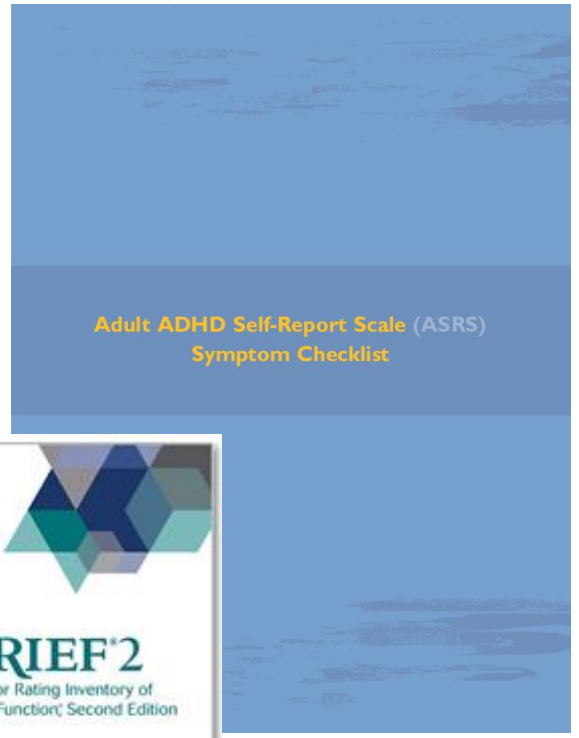
1. Children, teachers and caregivers (parents) experience an immediate effect of the medication and also have the hope of providing children with a means of controlling their behavior and giving them the "subtle message" that they can work with the medication to control their behavior and that medication does not simply work by itself.

2. When the medication has worn-off, behavior management can help adolescents with ADHD through some of the difficult transitional periods including morning time routines that are frequently difficult for those with ADHD, getting home from school, doing homework and getting ready for bed in the evening. Thus, behavior management can extend some of the beneficial effects of medication after the beneficial effects of the medication have dissipated.

3. While the stimulant medications work well for many of the symptoms associated with ADHD, behavioral strategies work well for many of the functional impairments associated with ADHD including enhancing academic efficiency and academic performance and social skills with peers. Thus, the combination of medication and behavioral strategies enhance both symptoms as well as functional outcomes.

Measuring Effectiveness

- Conner's forms and Vanderbuilt Forms for adolescents
- Adult ADHD Self-Report Screeening tool
- Behavior Rating Inventory of Executive Function 2 (BRIEF®2)

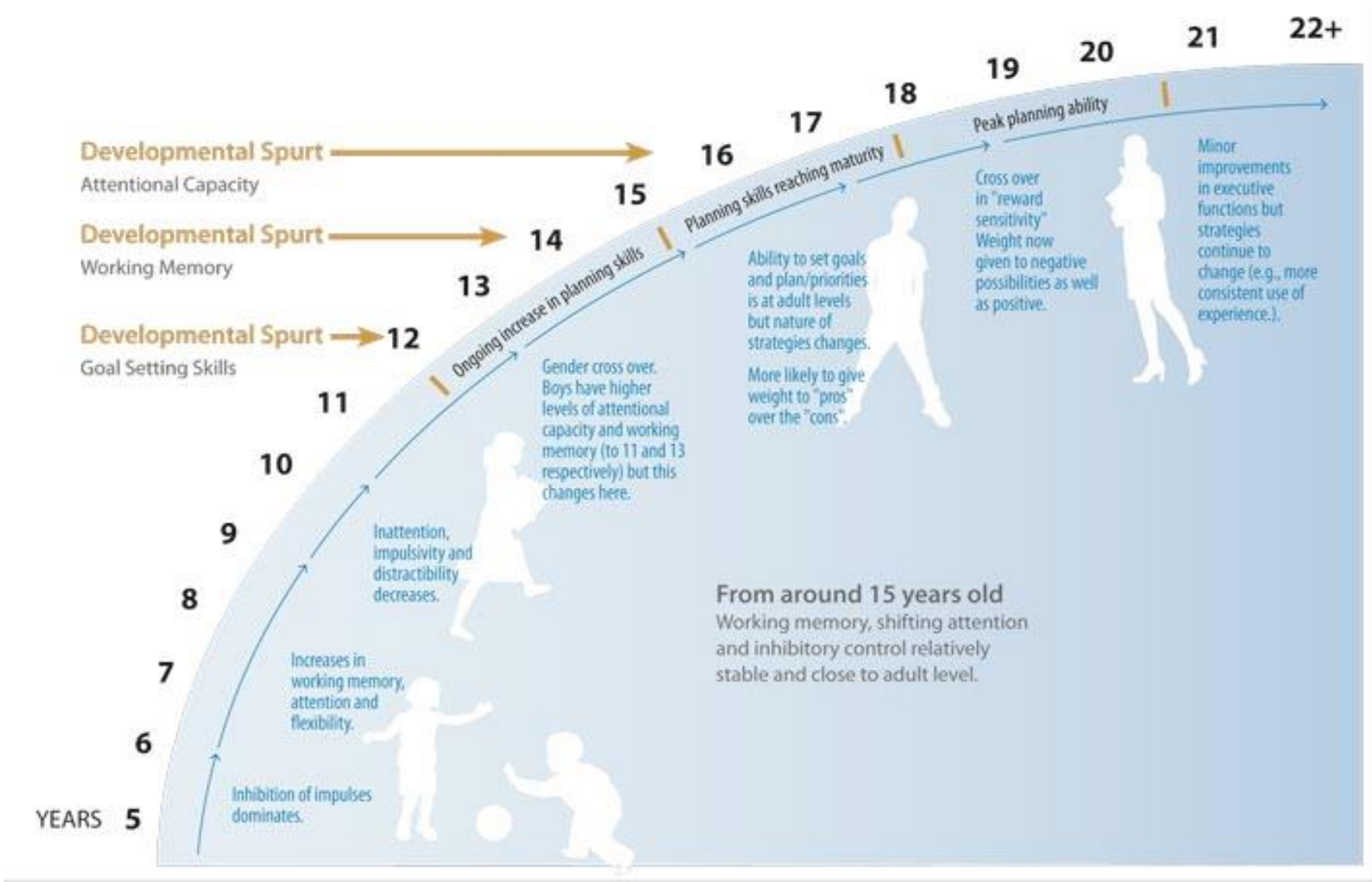


- Data collection
- Sharing data with all stakeholders (including clients)

Fear of Substance Abuse

- **One in ten** adolescents with untreated ADHD will use addictive drugs
- Use of evidence-based medications to treat ADHD **reduces** this risk

Development of Executive Functioning Skills



Source: J. Tarbox, J. (2017). Teaching Executive Function Skills to Individuals with Autism

Executive Functioning Intervention (ABA)

1. EF Skill Building
   - Exercises to try to improve deficient EF Skills
2. Teaching Compensatory Strategies
   - Strategies that may learn to implement him/herself to reduce the impact of EF deficits
3. Environmental Supports
   - Accommodations + Modifications to reduce the impact of EF deficits
4. Real-Life Application
   - Rehearsing combination of all the above
   - Fading to natural contingencies

Source: J. Tarbox, J. (2017). Teaching Executive Function Skills to Individuals with Autism

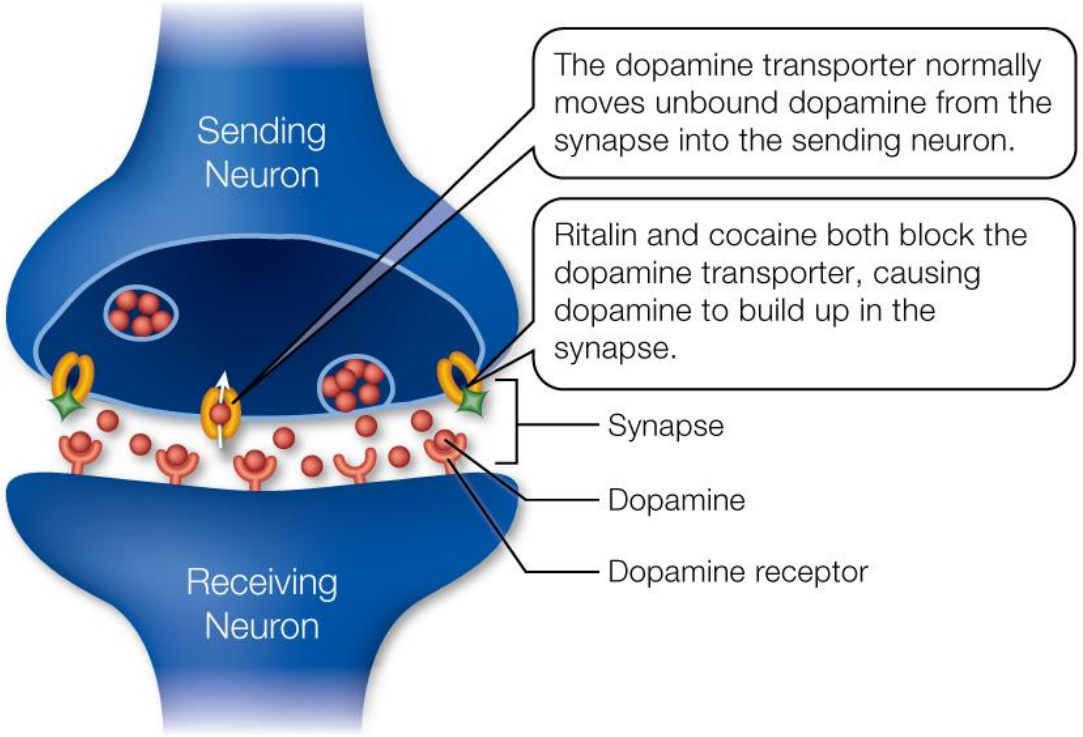
Executive Functioning Skill Building

Analogue Practice	Real-Life Practice
Contrived, more-controlled setting	Natural, less-controlled setting
Many practice opportunities	Fewer opportunities (either surreptitiously planned or naturally occurring)
Easy to control difficulty	Difficult to control difficulty level
Easy to control anxiety level	Difficult to control anxiety level
Generalization is a major concern	Generalization is more likely (but not guaranteed!)

Source: J. Tarbox, J. (2017). Teaching Executive Function Skills to Individuals with Autism

Education on the Causes of ADHD

- Inheritability
- Decreased dopamine in the frontal lobe
  - Impacts executive functioning skills
- Increased risk with prematurity, early childhood trauma, and co-occurring depression, anxiety, mood disorders, and learning disabilities.
- Drug induced with methamphetamine addiction



The Importance of Glucose

- Glucose in the pre-frontal cortex increases the release of dopamine
  - Sugar **DOES NOT** Cause ADHD
  - Sugar **DOES NOT** worsen ADHD symptoms
  - ***SIPPING*** lemonade during exams improves performance
  - Sugar is an important factor in proper brain functioning

Non-Medication Strategies

- Education
- Regular exercise: More effective than with any other mental health diagnosis
- Healthy eating and regular meals
- Healthy sleep patterns (7-9 hours of sleep per night)
- Taking regular breaks from concentration (every 10/3 rule).
- Use of tools to organize tasks and deadlines (Apps, alarms, color coding, cleared work space)
- Use of tools to decrease distractibility (i.e., headphones, quiet spaces).
- Passion
- Outdoor time
- Limited screen time
- Cognitive Behavioral Therapy (emotions, thoughts, and behavior)
- Dialectic Behavioral Therapy (challenging emotional response guiding behavior rather than "wiseman")

Case Study

Jason, a 8th grader, exhibits out-of-seat behavior, wanders in the classroom, has difficulty making or maintaining friendships, and is not making academic progress. His teacher mentions that he cries daily and asks to use the bathroom at least every thirty minutes.

His parents are contacted, but his mother's response is that she knows he has ADHD but is not interested in medication and will wait for him to outgrow it. She suggests repeating 8th grade as an option.

What would be the most effective way to address this?

Working Memory

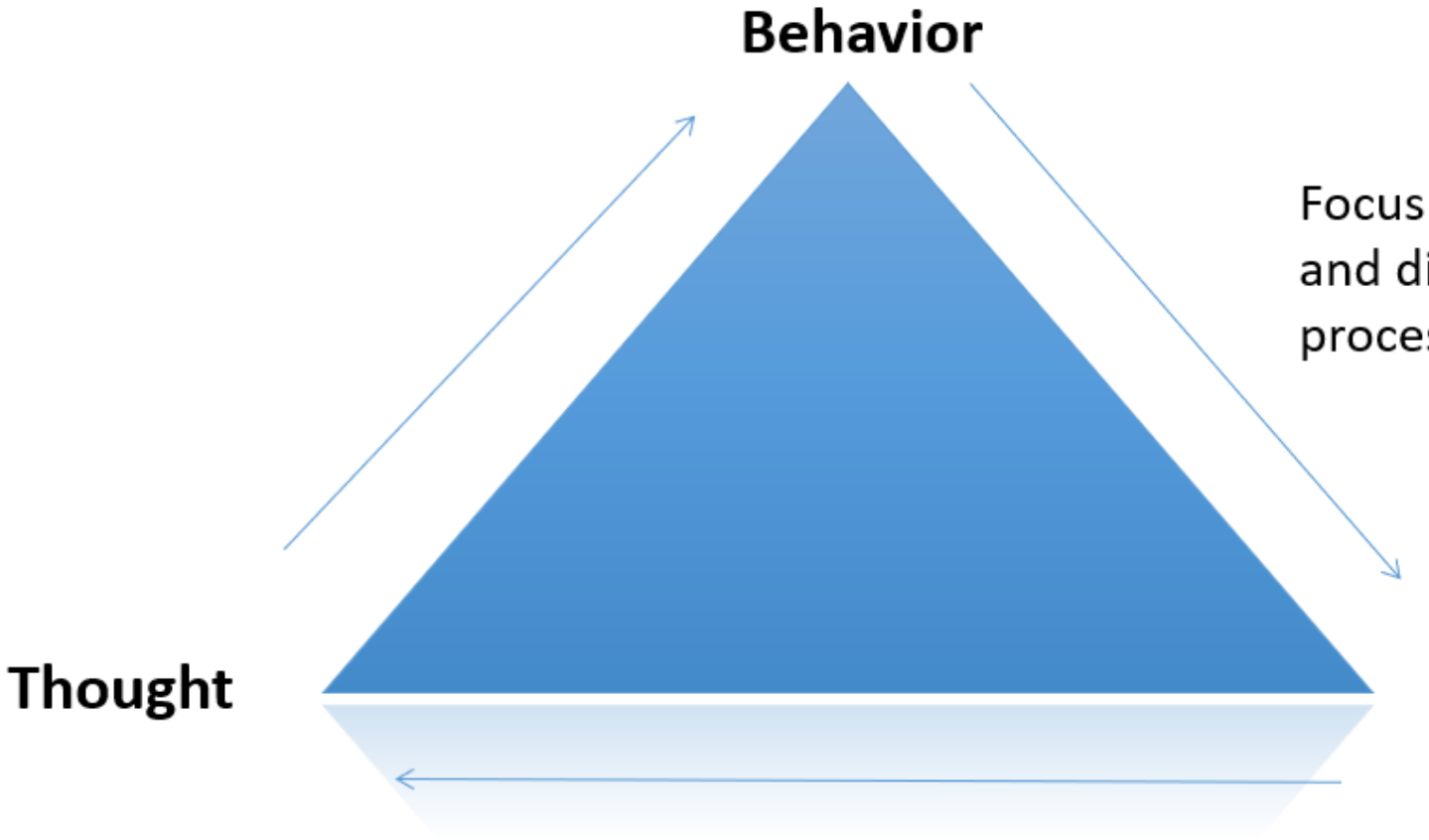
- Working memory strategies
  - List, cards, charts, etc. *(Visual aides, point systems)*
  - Address motivation and passion *(Reinforcer Assessment)*
  - Externalize important information
  - Externalize important deadlines *(Schedules & boards)*
  - Break up lengthy tasks (10:3 rule) *(Breaks)*
  - Use external rapid motivators *(Dense reinforcement schedules)*
  - Externalize problem solving *(Stimulus and response prompts)*
  - Emotional regulation in daily activities *(Identifying one's own emotion/feeling and responding appropriately. Learning to communicate internal events to others.)*

Behavioral Momentum

- Continuous reinforcement: **Video Games**
  - *Escape from current other demands*
  - *Social positive reinforcement from peers*
  - *Tangible (access to video games)*
  - *Sensory (tactile/visual input, chemicals released in brain etc.)*
  - *Response effort lower*
  - **Instant "gratification"**
- Delayed reinforcement: **Homework or Saving Money**
  - *Requires ability to engage in self-control*
  - *Requires ability to plan and follow-through*
  - *Response effort is higher*
  - *Reinforcer value generally higher*
  - **Delayed "gratification"**

Cognitive Behavior Therapy (CBT)

Focuses on helping the patient think about behavior differently



Focus is on identifying cognitive errors and distortions and errors in information processing (Kendall & Braswell, 1993)